

THE JOURNAL of the Michigan State Medical Society

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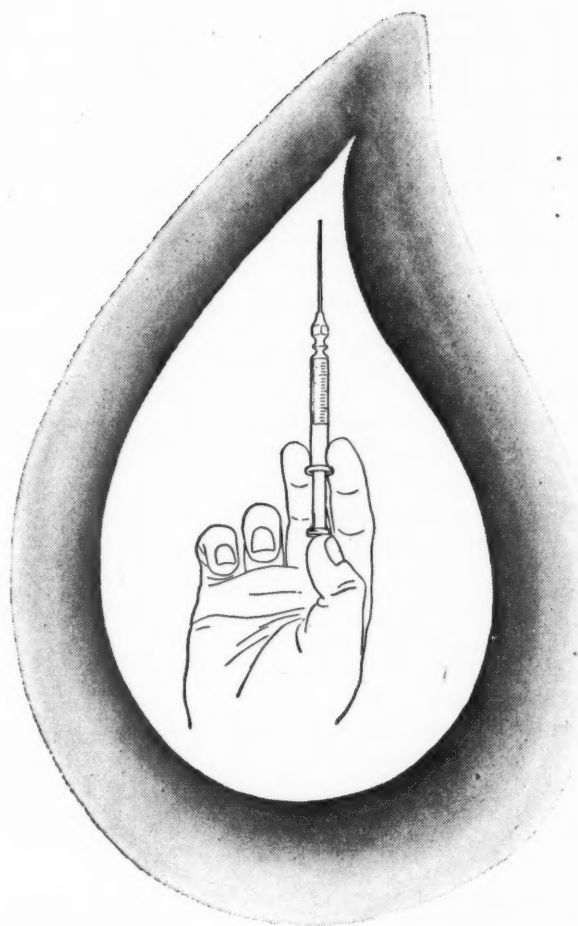
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W. B. Harm.....	5884 W. Vernor Highway, Detroit
J. Joseph Herbert, LL.B.....	127 S. Cedar, Manistique
J. E. Livesay.....	Mott Foundation Bldg., Flint
J. H. Schlemer.....	13826 Dexter Blvd., Detroit
E. D. Spalding.....	10 Peterboro, Detroit
D. B. Wiley.....	Utica

Special Committee to Study Insurance Reporting Forms

Matthew Peelen, <i>Chairman</i>	252 E. Lovall, Kalamazoo
O. O. Beck.....	274 W. Maple, Birmingham
E. A. Osius.....	901 David Whitney Bldg., Detroit



The Mary E. Pogue School

Complete facilities for training Retarded and Epileptic children educationally and socially. Pupils per teacher strictly limited. Excellent educational, physical and occupational therapy programs.

Recreational facilities include riding, group games, selected movies under competent supervision of skilled personnel.

Catalogue on request.

G. H. Marquardt, M.D. Barclay J. MacGregor
Medical Director Registrar

26 GENEVA ROAD, WHEATON, ILL.
(Near Chicago)

....PRONESTYL *Hydrochloride*

less toxic than quinidine

Indications and Dosage

IN CONSCIOUS PATIENTS

For the treatment of ventricular tachycardia:

Orally: 1 Gm. (4 capsules) followed by 0.5-1.0 Gm. (2 to 4 capsules) every four to six hours as indicated.

Intravenously: 200-1000 mg. (2 to 10 cc.). *Caution*—administer no more than 200 mg. (2 cc.) per minute.

Hypotension may occur during intravenous use in conscious patients. As a precautionary measure, administer at a rate no greater than 200 mg. (2 cc.) per minute to a total of no more than 1 Gm. Electrocardiographic tracings should be made during injection so that injection may be discontinued when tachycardia is interrupted. Blood pressure recordings should be made frequently during injection. *If marked hypotension occurs, rate of injection should be slowed or stopped.*

For the treatment of runs of ventricular extrasystoles:

Orally: 0.5 Gm. (2 capsules) every four to six hours as indicated.

IN ANESTHESIA

During anesthesia, to correct ventricular arrhythmias:

Intravenously: 100-500 mg. (1 to 5 cc.). *Caution*—administer no more than 200 mg. (2 cc.) per minute.

Supply

Pronestyl Hydrochloride Capsules, 0.25 Gm., bottles of 100 and 1000.
Pronestyl Hydrochloride Solution, 100 mg. per cc., 10 cc. vials.

PRONESTYL *Hydrochloride*

SQUIBB PROCAINE AMIDE HYDROCHLORIDE

SQUIBB

"PRONESTYL" IS A TRADEMARK OF E. H. SQUIBB & SONS

You and Your Business

MSMS ANNUAL SESSION, GRAND RAPIDS

September 24 to 28, 1951

Monday and Tuesday, September 24 and 25
House of Delegates
Ballroom, Pantlind Hotel

Wednesday, Thursday and Friday, September
26, 27 and 28
Scientific Sessions
Civic Auditorium

John W. Cline, M.D., San Francisco, President of the American Medical Association (September, 1951) will be top honor guest at the MSMS Annual Session.

Doctor Cline will speak to the MSMS House of Delegates on Tuesday, September 25, on "The Outlook for Medicine in the Immediate Future." This meeting will be held in the Ballroom of the Pantlind Hotel.

On Wednesday, September 26, at the public meeting (Officers Night), Dr. Cline's topic, in a brief presentation, will be "The Influence of Freedom Upon the Progress of Medicine."

Members of the Michigan State Medical Society are urged to invite their friends to attend the public meeting of Wednesday, September 26, at 8:30 p.m. in the Black and Silver Ballroom of the Civic Auditorium, Grand Rapids.

SCHOOL BUSES TO BE USED AS AMBULANCES

John R. Rodger, M.D., Bellaire, Chairman of the MSMS Rural Medical Service Committee, is responsible for another "Michigan First." He is author of a plan to utilize the 90,000 standardized school buses in the United States as highly serviceable ambulances in an emergency, such as following an atomic attack.

Through the co-operation of school authorities in his home area, Dr. Rodger converted a school bus into an ambulance at a cost of approximately \$15.00 for the lumber and materials—without any damage to the bus. This bus-ambulance was dem-

onstrated recently to Michigan Civil Defense officials, in Lansing.

According to the *Michigan Health Council Bulletin*, points in favor of such a plan include:

1. Buses are of uniform construction and conversion instructions could be uniform and quick.
2. Easily Identified—All are painted in a uniform manner making it easy for all to identify and expedite their movement in traffic.
3. Licensed and numbered so that record of their movement could be charted easily.
4. Trained, experienced drivers available.
5. Gasoline and repairs. An emergency supply of gasoline would be available at garage or storage point of each bus during early, important hours of an emergency.
6. Buses are heated. They carry emergency first-aid kits and fire extinguishers.

The bus-ambulance plan has been given the nod by the AMA National Emergency Medical Service Committee; the idea will be spread nationally by this important group.

POLICY RE EXTENT OF COMMITTEE RESPONSIBILITY

The Executive Committee of The Council, Michigan State Medical Society, on February 15, adopted the following policy regarding the extent of responsibility of committees of the Michigan State Medical Society and of The Council of the Michigan State Medical Society:

"That the Secretary be instructed to write the Chairman of each Michigan State Medical Society Committee and the Chairman of each Council or Special Committee reiterating The Council policy that:

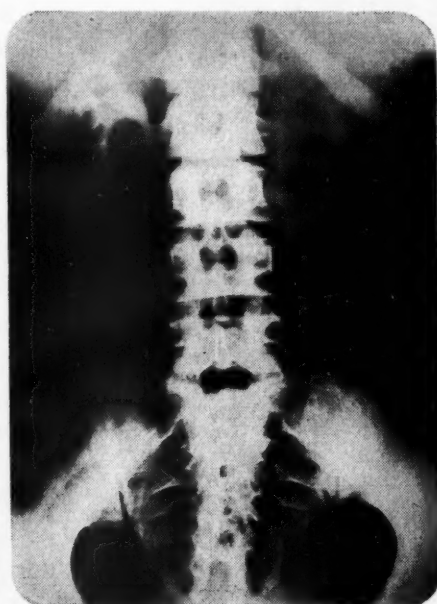
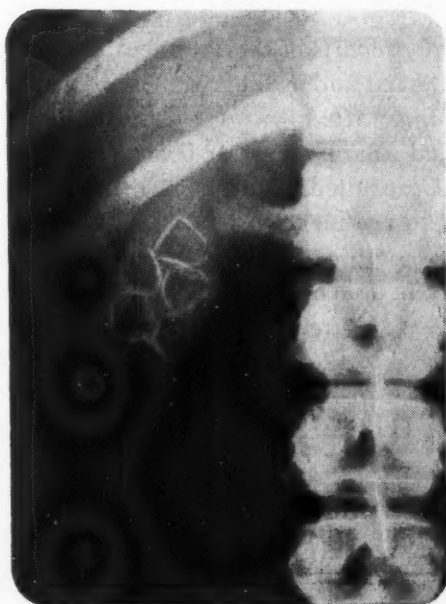
"1. All committee minutes must be approved by The Council or its Executive Committee before the actions of said committee become the policy of the MSMS.

"2. That publicity on all discussions, decisions and actions by committees and committeemen must be deferred until the minutes have been approved by The Council or by its Executive Committee, and that such publicity must be released only by The Council or its Executive Committee, through the Public Relations Department of MSMS.

"3. That when it is necessary to supplement committees' minutes with oral reports, the Chairmen may send

(Continued on Page 358)

*when decisions depend
on the*
DIAGNOSTIC MEDIA



PRIODAX[®]

NEO-IOPAX[®]

Cholecystographic agent with distinct advantages: sharp, clear contrast of gallbladder; greater freedom from side effects and from confusing, equivocal shadows.

Urographic agent with distinct advantages: versatility—for intravenous or retrograde pyelography; excellent shadows with notable safety.

PRIODAX tablets

(brand of Iodoalphonic Acid U.S.P.)

NEO-IOPAX solution

(brand of Sodium Iodomethamate U.S.P.)

Schering

SCHERING CORPORATION • BLOOMFIELD, NEW JERSEY

PRIODAX • NEO-IOPAX



EXTENT OF COMMITTEE RESPONSIBILITY

(Continued from Page 356)

official representatives to attend sessions of The Council or its Executive Committee.

"And further, that the Secretary be instructed to notify each committee chairman to transmit this information to each committeeman individually and to emphasize this policy in committee meeting."

HIGHLIGHTS OF EXECUTIVE COMMITTEE OF THE COUNCIL

Meeting of February 15, 1951

Seventy-seven items were considered by the Executive Committee of The Council at its February 15 meeting. Chief in importance were:

- Monthly financial reports were presented and approved. Bills payable were inspected and authorized to be paid.
- Children's Psychiatric Hospital site. The viewpoints were heard of those who desired this hospital to be built (a) at Northville or (b) in connection with a medical teaching institution. The motion of the Executive Committee of The Council was "that the Michigan State Medical Society is in hearty accord with the plans for the development of programs for psychiatrically disturbed children. We are not in any position to recommend a site for buildings to facilitate this program. We believe that the program of treatment is more important than of housing and we have confidence in the Legislature to seek the advice from leaders in this field from the medical profession to so locate such a unit as to take best economic advantage of these facilities and available personnel in the state."
- \$65 million hospital building program. The state hospital building program (\$60 million for mental hospitals) was discussed and referred to the MSMS Mental Hygiene Committee.
- MSMS policy re EMIC program, if a new program is promulgated by the federal government. Opinions were presented and the matter was referred to (a) the Child Welfare Committee and (b) the Maternal Health Committee for study and report.
- Discussion of matters of mutual interest with State Health Commissioner A. E. Heustis, M.D., included Report No. 8 entitled "Michigan's Health Agencies"—a staff report to the Michigan Joint Legislative Committee on Reorganization of State Government.
- Secretary L. Fernald Foster, M.D., was authorized to attend February 19 meeting in Governor's office, Lansing, re number of Doctors of Medicine in Michigan as part of Civil Defense Program.
- Wm. H. Gordon, M.D., Detroit, was appointed Chairman of MSMS Emergency Medical Service Committee, to take the place of H. F. Becker, M.D., Battle Creek, resigned. A letter of appreciation and thanks was forwarded to Dr. Becker for his extraordinary contributions to the Michigan State Medical Society and to Medicine.
- The monthly reports of the President, President-Elect, Secretary and Editor were approved.
- *The Michigan Manufacturers Association Bulletin* entitled "Bargaining Medical and Surgical Plans" was presented, and a letter of thanks was authorized to be sent to the Association.
- A special Committee to Study the Proposed Tuberculosis Bill, that may be introduced into the Michigan Legislature, was appointed as follows: L. A. Drolett, M.D., Lansing, Chairman, L. E. Holly, M.D., Muskegon, R. J. Hubbell, M.D., Kalamazoo, G. W. Slagle, M.D., Battle Creek, J. W. Towey, M.D., Powers, and J. Joseph Herbert, Manistique.
- The Roster Number of JMSMS (July) is to include addresses of all MSMS members, by action of the Executive Committee of The Council.
- Executive Office headquarters. The Executive Committee of The Council approved taking an option, leading to the purchase of property at 606 Townsend, Lansing, as very desirable and well-located property for the MSMS headquarters.
- Associate Fellowship in AMA for A. J. Baker, M.D., Grand Rapids: favorable recommendation was referred to the AMA for action in June, 1951, Atlantic City.
- Remission of dues of military members. This was authorized by the Executive Committee of The Council, which ruled that the precedent of the AMA re dues of MSMS members who go into Military Service be followed in Michigan so far as MSMS dues are concerned. Upon the return of the military member from service, the same procedure is to be followed (so far as MSMS dues are concerned) as prevailed during World War No. II.
- Woman's Auxiliary Silver Anniversary. This event will be celebrated in September, 1951; a

(Continued on Page 360)

IN
THE
AIM
TOWARD



Lessening Illness in the Aged

By maintaining complete adequacy of the diet during advancing years, considerable can be accomplished in reducing the frequency of illness in the aged population and in favorably influencing the mental state of the geriatric patient. In particular, ample intake of protein, vitamins, and minerals is needed for preventing many somatic and psychic symptoms of malnutrition often observed in the aged.¹

The dietary supplement, Ovaltine in milk, is a reliable aid for supporting the nutritional state of the elderly patient.

This nutritious beverage richly provides biologically complete protein, minerals—especially calcium and iron—and all the vitamins considered essential. Used in the recommended amount, it can readily supplement even poor diets to full nutrient adequacy. It is easily digestible, invigorating, and pleasingly palatable.

Note the wealth of nutrients furnished by Ovaltine in milk, as shown by the table given below.

1. Thewlis, M., and Gale, E. T.: Ambulatory Care of the Aged, Geriatrics, 5:331 (Nov.-Dec.) 1950.

THE WANDER COMPANY, 360 N. MICHIGAN AVE., CHICAGO 1, ILL.

Ovaltine

Three servings daily of Ovaltine, each made of ½ oz. of Ovaltine and 8 oz. of whole milk,* provide:

PROTEIN	32 Gm.	VITAMIN A	3000 I.U.
FAT	32 Gm.	VITAMIN B ₁	1.16 mg
CARBOHYDRATE	65 Gm.	RIBOFLAVIN	2.0 mg
CALCIUM	1.12 Gm.	NIACIN	6.8 mg
PHOSPHORUS	0.94 Gm.	VITAMIN C	30.0 mg.
IRON	12 mg.	VITAMIN D	417 I.U.
COPPER	0.5 mg.	CALORIES	676

*Based on average reported values for milk.

Two kinds, Plain and Chocolate Flavored. Serving for serving, they are virtually identical in nutritional content.



HIGHLIGHTS OF EXECUTIVE COMMITTEE

(Continued from Page 358)

silver page will be inserted in the Annual Session program and a gavel will be presented by the MSMS to the Woman's Auxiliary on September 26, 1951.

- The monthly progress reports of the Legal Counsel and of the Public Relations Counsel were presented.
- "Tell Me, Doctor." A new contract for this MSMS radio program, which will aggregate more savings to MSMS, was approved by the Legal Counsel and authorized to be signed by the Executive Committee of The Council.
- A new TV program over WXYZ-TV, to be titled "Your Medical Mail Box" was approved and will be inaugurated in the near future.
- Civil defense. The plan of John R. Rodger, M.D., Bellaire, to use school buses for transporting injured during civil defense emergencies, as demonstrated recently to the Michigan Civil Defense authorities, was outlined by Secretary Foster and Public Relations Counsel H. W. Brenne-man to the AMA National Emergency Medical Service Committee in Chicago, on February 3, and approved by this body, which will recommend the plan for adoption nationally.
- Conference on Basic Science and Medical Practice Acts. President Umphrey and Secretary Foster were authorized to attend a meeting called by the Governor to discuss these two acts in their relationship to securing more medicinal practitioners for Michigan.
- Site of new state tuberculosis sanitarium. The following statement re site of proposed tuberculosis sanitarium in South-western Michigan was approved by the Executive Committee of The Council:

"The Michigan State Medical Society is vitally interested in the establishment of the best possible tuberculosis facilities for the citizens of Michigan.

"The Council (Board of Directors) of the MSMS has neither been asked for a recommendation relative to the location of the new tuberculosis sanitarium in southwestern Michigan nor considers it its prerogative to make such a recommendation.

"The Council of the MSMS has the utmost confidence in the ability of the Michigan Legislature to devise methods to make the best possible choice of a site

for the new proposed sanitarium to best serve the people of Michigan.

"The Council recognizes that there are a number of tuberculosis specialists in the MSMS who upon request could make valuable contributions to the legislature in its deliberations.

"The Council of the MSMS heartily endorses the plan to enlarge the tuberculosis facilities of the state but will not interfere in any way with the methods of the Legislature in choosing a site or attempt to influence any such choice."

- Statement of policy re extent of responsibility of committees. (See page 356)
- Committee reports. The following Committee reports were given consideration. (a) Tuberculosis Control, meeting of February 6; (b) Committee to Study Basic Science Act, meeting of February 15; (c) Special Committee on Education, meeting of February 20; (d) Public Relations Committee, meeting of February 20; (e) Liaison Committee with Insurance Underwriters Association, meeting of January 31; (f) Distribution of Medical Care Committee, meeting of February 1; (g) Maternal Health Committee, meeting of February 6; (h) Rheumatic Fever Control Committee, meeting of February 7; (i) Medical Procurement Advisory Committee, meeting of February 8; (j) Infectious Diarrhea Committee, meeting of February 14.

ARMY ORDERS DUAL PURPOSE BUSES FOR PASSENGER AND AMBULANCE USE

A new dual-purpose, 37-passenger bus, which can be converted quickly into an efficient ambulance for use in any emergency, has been designed by the Army Ordnance Corps and 1,509 of them ordered, the Department of the Army has announced.

The busses, which will be manufactured by the Twin Coach Company of Kent, Ohio, are to be allocated to Army installations throughout the country. Total cost of the contract is \$19,617,000.

The Army-designed bus can be made ready to transport a total of fourteen litters in less than thirty minutes. Seats can be removed in forty-five minutes or less to accommodate twenty-one litters. The cost of special equipment necessary to convert a bus for ambulance service is approximately four per cent of the vehicle's total cost.

With the exception of two rear doors, the vehicle is similar in appearance to an inter-city passenger bus. The rear doors expedite the moving of casualties. The interior of the bus is equipped with removable folding-type seats.

EDITOR'S NOTE: This is a direct application of the suggestion of Michigan's Dr. John R. Rodger of Bellaire regarding the use of school busses as emergency ambulances.

UROLOGICAL AND GYNECOLOGICAL PATIENTS

"prompt and effective" response

"In cases in which there is no organic or obstructive disease, the response to Terramycin as a urinary anti-septic is prompt and effective."

"The patients with pyelitis of pregnancy or simple postoperative cysto-ureteritis responded very promptly....There was a prompt drop in temperature, disappearance of pyuria and bacilluria, and symptomatic relief."

Douglas, R. G.; Ball, T. L., and Davis, I. F.:
California Med. 73:463 (Dec.) 1950.

Dosage: 2 Gm. daily by mouth in divided doses q. 6 h. is suggested for most acute infections. In severe infections, a high initial dose (1.0 Gm.) or higher daily dosages (3 to 6 Gm.) should be used. Treatment should be continued for at least 48 hours after the patient's temperature has become normal and acute symptoms have subsided.



mycin

HYDROCHLORIDE



Supplied: 250 mg. capsules, bottles of 16 and 100;
100 mg. capsules, bottles of 25 and 100;
50 mg. capsules, bottles of 25 and 100.



Pfizer

CHAS. PFIZER & CO., INC., Brooklyn 6, N.Y.

Woman's Auxiliary to the Michigan State Medical Society

Twenty-fifth Anniversary



MRS. GUY L. KIEFER

This year marks the twenty-fifth anniversary of the founding of the Woman's Auxiliary to the Michigan State Medical Society. Shall we "Turn time back in its flight" and look at the beginnings of our organization that we may gain perspective and evaluate our efforts?

The great "Family Tree" of the Woman's Auxiliary to the American Medical Association was rooted and nourished in the richly productive soil of Texas. In May, 1917, the Woman's Auxiliary to the Dallas Medical Society was formed and created the nucleus which was to expand across the country. The primary purpose at that time was to provide social entertainment for the wives of doctors attending medical meetings and to afford any assistance the husbands might request—a very small beginning for the present loyal and efficient army that has so competently aided in the preservation of the American way of life as applied to the medical profession.

In the year 1926, a group of doctors' wives became known as the Woman's Auxiliary to the Michigan State Medical Society under the leadership of Dr. Caroline Bartlett Crane. History relates that Dr. Crane conceived the idea and our beloved Mrs. Guy L. Kiefer promoted it. There is no record that could convey the amount of work involved in expanding an organization of this kind. Nor could such a record describe the moments of discouragement and the determined renewal of effort; one has to live those moments. But to anyone who looks back at the beginning and has a basis of comparison with the present, it becomes very clear that there is a reason for speaking of Mrs. Kiefer as the "Mother" of this organization.

The Auxiliary to the Michigan State Medical Society was formally organized at Mackinac Island, June 16, 1927, by Dr. Herbert Randall of

Flint, with Dr. Caroline Bartlett Crane of Kalamazoo as chairman. Mrs. Guy L. Kiefer was elected president. Twenty-eight members signed the roll at that first meeting. Today, twenty-five years later, the membership is approximately 2000 and the national membership numbers over 50,000; which verifies the adage "Great Oaks from Little Acorns Grow."

During the Auxiliary's entire history, Mrs. Guy L. Kiefer has been a colorful and fascinating figure. Full of enthusiasm, gifted with a charming and gracious personality, with a deep veneration for the medical profession, a great understanding of its problems and a regard for the sanctity of the physician-patient relationship, she was an ideal person to initiate other doctors' wives into the privileges of the Auxiliary. Always she has worked unceasingly with the Auxiliary in its efforts to assist in the projects of the Michigan State Medical Society, and she has earned a lasting place in the annals of this group. An evidence of the esteem in which she was held was the adoption of the following resolution:

The Woman's Auxiliary to the Michigan State Medical Society, convened in Grand Rapids, Michigan, September 17, 1941, at their fifteenth annual meeting,

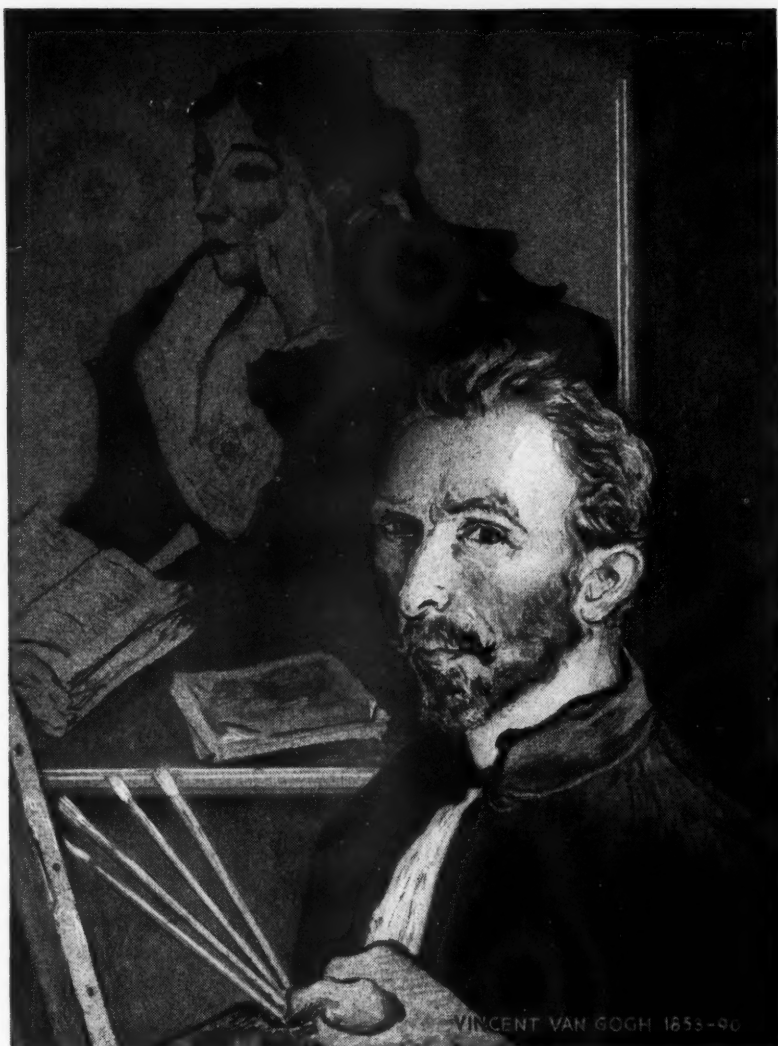
DO HEREBY RESOLVE

To extend to Mrs. Guy L. Kiefer on the occasion of her seventy-fifth birthday, November 3, 1941, our best wishes and also to express our sincere appreciation for the many years of service and inspiration she has been to the auxiliary.

MRS. WILLIAM J. BUTLER, *President*
MRS. HENRY J. PYLE, *Secretary*

One could not write a history of the Auxiliary to the Michigan State Medical Society without recognizing the service given by Mrs. Kiefer in her untiring promotional work of those early years, nor for her continuing loyalty to and affection for the Medical Society and everything for which it stands. Neither could one forget the contribution that each of the following women who have acted as president has made.

(Continued on Page 366)



★ *Epileptic Men of Genius* ★

The Dutch painter, Vincent Van Gogh, one of the masters of Post-Impressionism, suffered from the psychic equivalent type of epilepsy. During one of his many periods of confusion he cut off one of his ears and presented it to a lady friend.

Comparative studies have shown that in some cases better control of grand mal as well as petit mal seizures can be obtained with Mebaral than with corresponding doses of other antiepileptic drugs. Mebaral produces tranquillity with little or no drowsiness. It is particularly desirable not only in epilepsy but also in the management of anxiety states and other neuroses. The fact that Mebaral is almost tasteless simplifies its administration to children. Average dose for children $\frac{1}{2}$ to 3 grains, adults 3 to 6 grains daily. Tablets $\frac{1}{2}$, $1\frac{1}{2}$ and 3 grains.

MEBARAL®
Brand of Mephobarbital

Winthrop-Stearns INC.
NEW YORK 13, N. Y. WINDSOR, ONT.

Mebaral, trademark reg. U. S. & Canada



WOMAN'S AUXILIARY

(Continued from Page 364)

PAST PRESIDENTS

*Dr. Caroline Bartlett Crane, Kalamazoo	1926
Mrs. Guy L. Kiefer, Detroit	1927-1928
Mrs. L. J. Harris, Jackson	1929-1930
Mrs. J. Earle McIntyre, Lansing	1931-1932
Mrs. S. A. Mercer, Pontiac	1932-1933
Mrs. E. L. Whitney, Detroit	1933-1934
*Mrs. F. T. Andrews, Kalamazoo	1934-1935
Mrs. A. M. Giddings, Battle Creek	1935-1936
Mrs. A. V. Wenger, Grand Rapids	1936-1937
Mrs. G. C. Hicks, Jackson	1937-1938
Mrs. P. R. Urmston, Bay City	1938-1939
Mrs. L. G. Christian, Lansing	1939-1940
Mrs. R. V. Walker, Detroit	1940-1941
Mrs. W. J. Butler, Grand Rapids	1941-1942
Mrs. G. L. Willoughby, Flint	1942-1943
Mrs. J. G. Walch, Escanaba	1943-1944
Mrs. H. L. French, Lansing	1944-1945
Mrs. Lloyd C. Harvie, Saginaw	1945-1946
Mrs. Retla Alter, Jackson	1946-1947
Mrs. T. Grover Amos, Detroit	1947-1948
Mrs. W. L. Dixon, Grand Rapids	1948-1949
Mrs. Don R. Wright, Flint	1949-1950

*Deceased

Following the pattern established by Mrs. Kiefer, each succeeding president has given her best effort to extending the organization and adhering to the standard of ethics which distinguishes the medical profession.

In the early years it was exceptional for medical men to include their wives in a mutual program relating to the profession which they, themselves, esteemed so highly and which, up to that time, had been kept apart from their home lives. However, the object of the women was *not* to invade that privacy but to devote their interests to the part of life that a busy doctor could not manage; to give the community service that their husbands did not have time to give and in every way to sublimate themselves to the ultimate good of the medical profession.

The various county auxiliaries have had, for years, their special important local projects such as aiding in the promotion or the sponsoring of:

- Cancer Detection Centers
- Easter Seals for the Michigan Society for Crippled Children
- Red Cross Work and the Red Cross Blood Donor Program
- Nurses' Recruitment, Nurses' scholarships and financial assistance for nurses.
- Cerebral Palsy Clinics
- Public meetings on Mental Hygiene
- Study groups for medical legislation and numerous other projects.

In some instances local auxiliaries have spon-

sored money-raising projects for such things as:

- Gifts to patients in sanatoriums
- Loan closets for patients
- Gifts for orphans
- Building funds for camps, hospitals and sanatoriums.

Our state projects are as follows, many of them established several years ago:

- Student Loan Fund
- Promotion of "Hygeia" Magazine
- Collecting of Medical and Surgical Relief Supplies
- Promoting and sponsoring The Tuberculosis Speaking Project
- Promotion of Blue Cross and Blue Shield Voluntary Insurance plans
- Promoting the Medical Associates Program

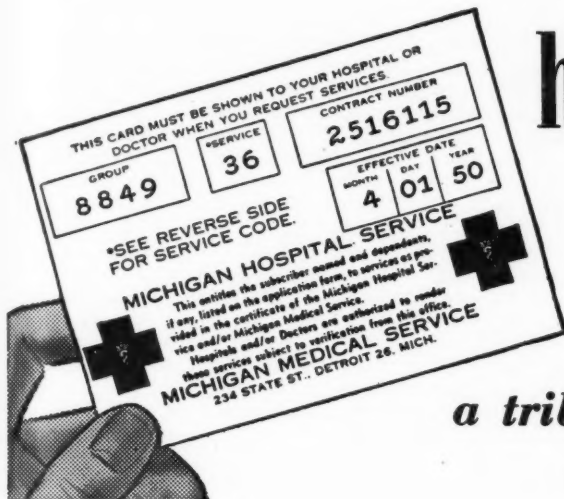
There have been other state Health projects sponsored by the Auxiliary which have become laws of our state, such as the requirement of health examinations in order to obtain a marriage license.

We have also worked on the CAP project. CAP, which means Co-operation of the American People, was organized during 1948-1949 and is the first project in which the individual doctor's wife gave her best effort so that medical practice as we have known it in the United States for the past one hundred years might continue. This program, or similar ones, was not only carried on by the members of the medical profession and their wives in Michigan but also in all the other 47 states. All reports show that CAP was a tremendous success. So during the twenty-five years of the auxiliary's existence the doctors' wives of Michigan have gradually learned ways to assist without intruding, and in the struggle to keep the medical profession from becoming another federal project their work has been of incomparable value.

It would be interesting, if one had space, to trace the development of this organization through the various progressive steps made by each president and her officers, but that does not seem feasible now. However, during the last several years more and more attention has been paid to the formation of auxiliaries in the counties throughout the state. This expansion seemed to become more active about 1945 and a closer co-operation with the medical society was also attained. During the following years the membership increased rapidly and new county auxiliaries were constantly formed. Where there was no local organization members-at-large were encouraged to join the state group, so fairly complete representation was made possible. In 1948, the state membership had grown to such proportions it was decided by the State Board that the state should be divided into Districts with

(Continued on Page 370)

One-Third of the people in Michigan have this non-profit protection



*a tribute to the Doctors
and Hospitals of Michigan*

The record of growth of Blue Cross-Blue Shield is an amazing one. Every year since these plans were started has seen substantial increases both in membership and in dollar value of benefits paid. In the past twelve years, for example, over \$169,750,000 has been paid out by the Plans in health-care benefits.

Here is clear evidence that your program is meeting the needs of the people . . . providing them with a bulwark against the catastrophic costs of illness on a wholly non-profit voluntary basis.

Below is our annual report of our stewardship of your Blue Cross and Blue Shield plans:

STATEMENT OF CONDITION

Report of Condition as of the Close of Business, December 31, 1950

MICHIGAN HOSPITAL SERVICE

ASSETS

Cash in Banks and Office.....	\$ 4,616,790.65
United States Treasury and Defense Bonds.....	7,392,346.08
Accrued Interest.....	46,260.78
Subscription Fees—Receivable	185,912.08
Other Assets	254,522.81
Total Assets.....	\$12,495,832.40

LIABILITIES AND RESERVES

Reserves for Payment for Services Rendered Subscribers (Including (Unreported)).....	\$ 5,959,340.34
Reserve for Unearned Subscription Fees.....	2,304,766.22
Reserve for Contingencies.....	4,136,465.05
Other Liabilities	95,260.79
Total Liabilities and Reserves.....	\$ 12,495,832.40
Total Benefits Paid Since Inception.....	\$114,021,947.28

MICHIGAN MEDICAL SERVICE

ASSETS

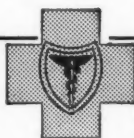
Cash in Banks and Office.....	\$3,262,782.62
Real Estate—Home Office Property.....	668,071.07
United States Government Bonds.....	2,213,405.47
Interest and Rents Due and Accrued.....	38,213.01
Subscription Fees—Receivable.....	88,661.57
Funds Advanced for Veterans Administration.....	136,221.79
Other Assets.....	72,470.44
Total Assets.....	\$6,479,825.97

LIABILITIES AND RESERVES

Reserve for Payments for Services Rendered Subscribers (Including Unreported).....	\$ 2,682,760.00
Reserve for Unearned Subscription Fees.....	1,213,208.03
Reserve for Contingencies.....	2,560,119.72
Other Liabilities.....	23,738.22
Total Liabilities and Reserves.....	\$ 6,479,825.97
Total Benefits Paid Since Inception.....	\$55,760,426.72

BLUE CROSS

Michigan Hospital Service



BLUE SHIELD

Michigan Medical Service

234 State Street • Detroit 26

MSMS County Secretaries-Public Relations Conference

Detroit, January 21, 1951

William M. LeFevre, M.D., Chairman of County Society Secretaries during the past year, welcomed 165 registrants at the 1951 County Secretaries-Public Relations Conference, held at the Book-Cadillac Hotel, Detroit, on January 21. The five morning speakers on "Channels and on Media of Communication" were E. J. McCormick, M.D., Toledo, Ohio, Trustee of the AMA; C. E. Umphrey, M.D., Detroit, MSMS President; H. J. Meier, M.D., Coldwater, member of the MSMS Public Relations Committee; Jack Pickering, Detroit, Science writer for the *Detroit Times*; and Professor A. Westley Rowland, Alma, Director of Publicity of Alma College.

Major General George E. Armstrong, Washington, D. C., Deputy Surgeon General of the Army, was guest speaker at the noon-day meeting, presided over by R. J. Hubbell, M.D., Kalamazoo, Chairman of the MSMS Council. General Armstrong's subject was "The Wartime Role of the M.D.—In and Out of Uniform."

Governmental and Economic Questions were presented at the afternoon public relations session, with L. W. Hull, M.D., Detroit, Chairman of the MSMS Public Relations Committee, in charge.

William Palmer, Lansing, Executive Secretary of the Michigan Petroleum Industries Committee, outlined in a practical manner "Governmental Contacts and Legislative Outlook for 1951"; Robert B. L. Murphy, Madison, Wisconsin, Legal Counsel for State Medical Society of Wisconsin, gave a highly illuminating, interesting—and frequently sardonic—review of "Tax Planning for the Physician." Earl R. Bramblett, Detroit, Labor Relations Department, General Motors Corporation, spoke in a realistic manner on "Medical Service in Labor Relations." L. Fernald Foster, M.D., Bay City, MSMS Secretary, ended the day's Conference by speaking on "Co-ordination of Medical and Health Organization."

Ample time was given both in the morning and in the afternoon for audience participation.

The 165 attendants were representative of the following groups:

County Secretaries—J. E. Mahan, M.D., Allegan (Allegan); L. Fernald Foster, M.D., Bay City (Bay-Arenac-Iosco); D. B. Johnson, M.D., Coldwater (Branch);

H. R. Bodine, M.D., Battle Creek (Calhoun); Bruno Cook, M.D., Westphalia (Clinton); N. L. Lindquist, M.D., Escanaba (Delta-Schoolcraft); E. T. Palm, M.D., Crystal Falls (Iron-Dickinson); E. P. Griffin, Jr., M.D., Flint (Genesee); A. B. Aldrich, M.D., Houghton (Houghton-Baraga-Keweenaw); J. L. Isbister, M.D., Lansing (Ingham); H. W. Porter, M.D., Jackson (Jackson); G. H. Riggerink, M.D., Kalamazoo (Kalamazoo); J. R. Brink, M.D., Grand Rapids (Kent); R. M. Duffy, M.D., Pinckney (Livingston); D. B. Wiley, M.D., Utica (Macomb); J. F. Konopa, M.D., Manistee (Manistee); J. A. White, M.D., Big Rapids (Mecosta-Osceola-Lake); B. E. Henig, M.D., Grayling (North Central Counties); W. M. LeFevre, M.D., Muskegon (Muskegon); J. M. Cook, M.D., Newaygo (Newaygo); A. R. Young, M.D., Pontiac (Oakland); Robert Bucklin, M.D., Saginaw (Saginaw); R. C. Brown, M.D., Owosso (Shiawassee); and G. T. McKean, M.D., Detroit (Wayne).

Executive Secretaries—Sara M. Warren, Flint (Genesee) and Else Kolhede, Detroit (Wayne).

Officers—C. E. Umphrey, M.D., Detroit, President; O. O. Beck, M.D., Birmingham, President-Elect; L. Fernald Foster, M.D., Bay City, Secretary; A. S. Brunk, M.D., Detroit, Treasurer; R. H. Baker, M.D., Pontiac, Speaker—House of Delegates; J. E. Livesay, M.D., Flint, Vice-Speaker—House of Delegates; Wilfrid Haughey, M.D., Battle Creek, Editor; and W. E. Barstow, M.D., St. Louis, Immediate-Past President.

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Editors—A. C. Pfeifer, M.D., Mt. Morris (*Bulletin of Genesee County Medical Society*); H. W. Porter, M.D., Jackson (*Jackson County Bulletin*); G. H. Riggerink, M.D., Kalamazoo (*Bulletin of Kalamazoo Academy of Medicine*); and E. H. Heneveld, M.D., Muskegon (*Muskegon County Medical Society Bulletin*).

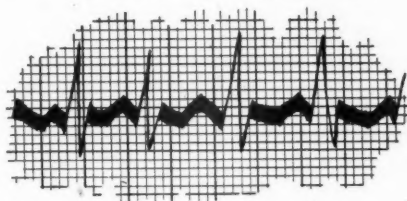
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(Continued on Page 370)

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COUNTY SECRETARIES—PUBLIC RELATIONS CONFERENCE

(Continued from Page 368)

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WOMAN'S AUXILIARY

(Continued from Page 366)

a Director for each, the Directors being elected by the Board. During the succeeding years the effort to extend the membership of the Auxiliary was continued and at present we have 42 counties and nine counties with members-at-large. There are only four County Medical Societies with *no* auxiliary members, i.e., Ionia-Montcalm, Barry, Gogebic, Chippewa-Mackinac.

Under Mrs. Oscar Stryker's able guidance, the Auxiliary has achieved much this year. Among other progressive steps, the date of the Board meeting has been changed from Fall to Spring, which will make possible advance planning of the following year's work. The meeting will also continue for two days instead of one.

Mrs. Stryker brought to the office of President an unusual understanding of the purpose of the auxiliary and considerable experience in organization which has been invaluable. She had served as Chairman of Organization and assisted with the expansion accomplished during previous years. She is endowed with executive ability, a willingness to work for an objective and a seemingly endless patience in accomplishing that objective.

Starting with twenty-eight members in 1927, with our beloved Mrs. Guy L. Kiefer as president, your Auxiliary in twenty-five years has covered forty-two counties, has a membership of 2,000, has expanded Public Relations in every community in which it is active, has earned the appreciation of the medical profession and brought about a spirit of co-operation and friendship between the wives of the doctors. And, as it began with able leadership, so it carries on with Genevieve Stryker capably conducting it toward its Silver Anniversary.

To each of the splendid women who have acted as president, we owe much, for each one has left an indelible mark on the history and accomplishments which trace the progress of this group of women.

Our humble desire was and is to be of service to a profession revered since the days of the Great Physician himself, and may we look forward to many more years of active participation in the aims and desires of the members of the Michigan State Medical Society as they hold their honored place in the American Way of Life.

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Cancer Comment

TERMINAL CARE FOR CANCER PATIENTS

A report on terminal care for cancer patients has been released recently by The Central Service for the Chronically Ill of the Institute of Medicine of Chicago, Illinois. While the study covered a three-year period and was confined to Chicago and Cook County, the information gained from the records of 5,978 persons which comprised the study developed some generalizations about this problem that should be of interest to every physician and every community in the country.

Among the conclusions reached in the study, the following are of general interest:

"Terminal care cannot be differentiated sharply from other care required by cancer patients. Facilities and services providing such care, therefore, should operate by close co-ordination with those providing treatment services for cancer patients."

The primary site of cancer is the chief determining factor in the length of time terminal care is required. The terminal care period was found to be longest for skin cancer and shortest for cancer of the respiratory system. The average length of time required for all cancers was ninety-three days.

The study showed that there was one terminal care patient for every four annual cancer deaths. Applied to Michigan experience, this ratio indicates that there are at this time at least 2,175 cancer patients in this state in terminal stages of their disease. The study further showed that 20 per cent of all fatal cancer patients could, and preferred to, remain in their homes for their terminal treatment. For the other 80 per cent, provision should be made for beds in hospitals and related institutions for their care.

These beds should be in the ratio of one bed for every nine annual cancer deaths. In Michigan, this would call for 966 beds for terminal care of cancer patients. For cancer patients receiving such care in their homes, a ratio of one patient to every six annual cancer deaths was established.

"The median age at death among the 5,978 cancer patients included in this study was sixty-two years. Fifty-one per cent of the deaths occurred among men and 49 per cent in women."

That cancer patients often have other diseases and disabling conditions concurrently with their cancer was revealed in this study. Among the

patients coming to autopsy, 84 per cent were found to have had one or more additional diseases.

Contrary to a common fallacy that advanced cancer is always a foul-smelling open ulcer, more than half of the patients studied had no open lesions. In cases with open ulcers it is possible to prevent obnoxious conditions by frequent change of dressings and good nursing care.

As to the nursing requirements for adequate terminal care of such patients, an average of four hours of bedside care per patient per day was needed. The study revealed that:

"More nursing time and a better quality of nursing services are needed both in institutional facilities and for care of patients in their homes. More professional nurses are needed. There is an even greater need for properly trained practical nurses."

The study showed a deficiency in the social case work services in the institutions. This was especially true in those cases where a patient on release from an institution left behind the staff physician who had been in charge and had to seek an outside physician for further home care. Often the patient was at a loss as to how to proceed to obtain another physician's services and adequate and competent social service attention was found invaluable in such cases.

Costs of terminal care are discussed in some detail in this report. However, as costs vary from place to place and time to time the survey figures are not quoted. The report stated that—"More than half of all patients requiring terminal care require some help in meeting the costs of adequate care. In most of the instances the patient and his family can pay a part of the cost of the care required, but not all."

For many years, the question of the care of terminal cancer patients in general hospitals or in institutions especially devoted to such care has never been settled. The report takes an unequivocal stand on this question by stating:

"Facilities for the terminal care of cancer patients should not be set up as specialized institutions operated solely for terminal care of cancer patients. Such a plan means that these are places where patients go to die from cancer. Specialization of this type is almost inhuman in the emotional trauma it produces for the patient and his family. In addition, it results in unnecessary duplication and overlapping in community services with consequent increases in the total cost to the community."

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The Clinical Importance of "Early Cancer"

By John R. McDonald, M.D., and
Lewis B. Woolner, M.D.

Rochester, Minnesota

THE CAMPAIGN for cancer control which has been conducted by state and national organizations has, in part, been directed toward the recognition and eradication of lesions which are thought to be either "precancerous" or "early cancer." Knowledge of the significance of these various lesions is necessary to enable the physician to treat these lesions intelligently.

The clinician must realize that there is a phase in the development of certain common cancers in which there are few or no symptoms and no gross tumor. Lesions in this early stage are completely curable if they are recognized and treated properly. This stage of the disease has only recently been recognized; it is known as "carcinoma in situ." The term "carcinoma in situ" has been coined to designate a lesion which cytologically resembles ordinary cancer but in which there is no infiltration into the subjacent tissue. The term "preinvasive" would appear to be a better and more descriptive term because it lays stress on the eventual invasive character of the lesion.

Evidence has been presented that a preinvasive stage of carcinoma exists in many organs and tissues of the body. In this paper, three common sites of carcinoma—breast, cervix and colon—will be considered.

Read at the meeting of the Michigan State Medical Society, Detroit, Michigan, September 22, 1950. From the Division of Surgical Pathology, Mayo Clinic, Rochester, Minnesota.

APRIL, 1951

Breast

Comedo Carcinoma.—An intraductal or comedo carcinoma is a lesion in which cancer cells fill the ducts of the breast. Any portion of the duct system may be involved. A distinction should be made between comedo carcinoma, which is entirely intraductal, and one in which there is infiltration beyond the membrane of the duct. Lesions in which no infiltration can be found represent carcinoma in situ.

Incidence: Comedo carcinoma, as the term is commonly used to denote a condition in which plugs of pasty material can be expressed from the surface of the tumor, is a relatively uncommon type of cancer of the breast comprising, according to Anderson, approximately 10 per cent of the total. This figure undoubtedly includes all carcinomas of comedo type, whether they exhibit areas of infiltration or not. It is probably true that the majority of comedo carcinomas are infiltrative by the time they are discovered and surgically removed. The noninfiltrative form frequently presents no palpable tumor and, hence, its presence is not readily recognized. True noninfiltrative comedo carcinomas, according to Foote and Stewart,⁸ comprise only 1 per cent of removed mammary cancers.

Gross Appearance: A comedo carcinoma usually is an ill-defined lesion in the breast in which the involved ducts may be recognized by the plugs of tumor cells which can be expressed from the cut surface. These plugs are grayish white, fairly solid and represent partially necrotic tumor tissue. The lesion may be diffuse and involve a large area of the breast or it may involve only a few ducts. Frequently it is multicentric. Characteristically, a tumor mass is not present. When a tumor mass is associated with a comedo carcinoma, it usually indicates that infiltration has occurred.

Microscopic Appearance: Microscopically, the

ducts of the breast are filled with highly cellular epithelial tissue which has all the cytologic characteristics of cancer (Fig. 1a). The centers of these epithelial masses may undergo necrosis, and rarely

ble both grossly and microscopically. The infiltrative portion of such a tumor does not differ histologically from that seen in ordinary (scirrhous or medullary) carcinoma.

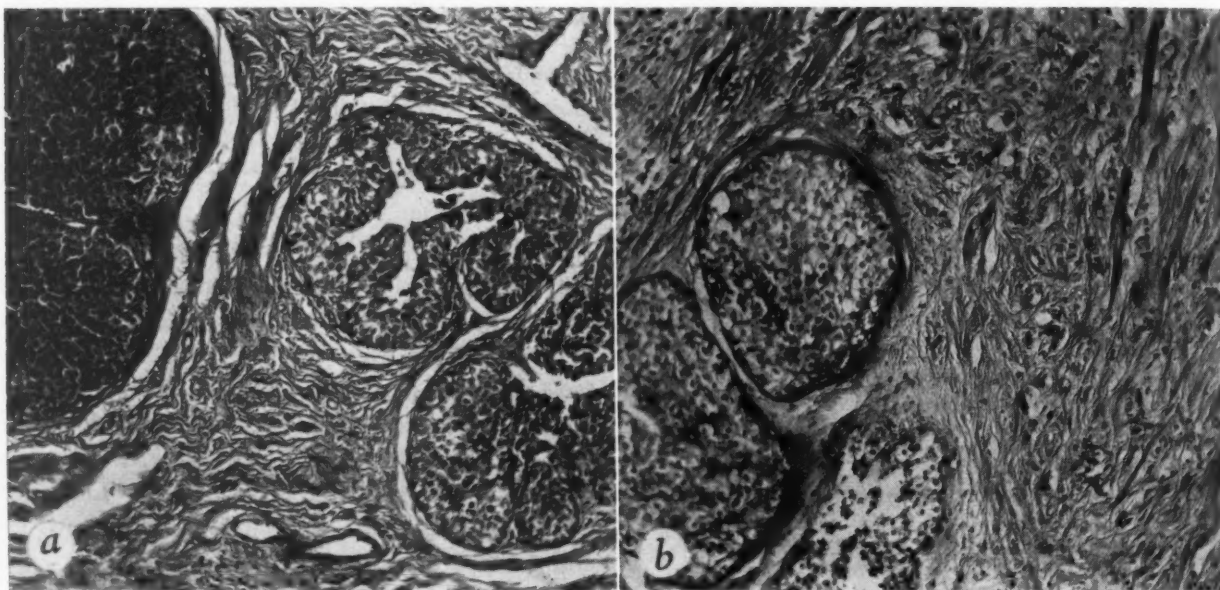


Fig. 1. (a) Comedo carcinoma confined to the ducts (hematoxylin and eosin; $\times 90$); (b) comedo carcinoma with infiltration (hematoxylin and eosin; $\times 110$).

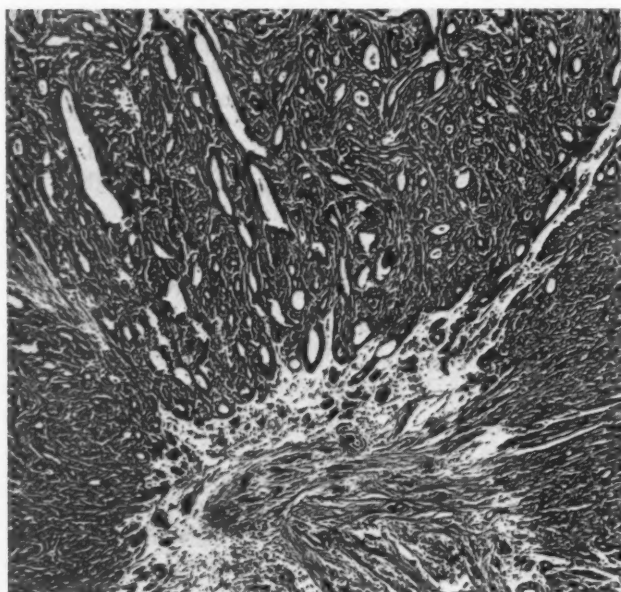


Fig. 2. Sclerosing adenosis of the breast: marked fibrosis of hyperplastic mammary lobules (hematoxylin and eosin; $\times 50$).

may be calcified. At times, the tumor cells form a definite glandular pattern within the duct; occasionally production of mucus is prominent. The microscopic appearance of infiltrative comedo carcinoma is not distinctive (Fig. 1b). The only feature distinguishing it from ordinary cancer of the breast is the more marked intraductal growth visi-

Clinical Course: As is observed of carcinomas in situ elsewhere, a comedo carcinoma of the breast should be characterized by a latent period between the appearance of such a lesion and infiltration. It would appear that a comedo carcinoma may, in some instances, have a prolonged noninfiltrative stage. Some evidence for this statement can be obtained from a study of Paget's disease of the nipple, in which there is a carcinoma in situ of the nipple, with associated comedo carcinoma of the underlying mammary ducts. In the average instance of Paget's disease, the changes in the nipple which generally are recognizable clinically as eczema may be present for many years prior to the development of metastasis. Metastasis, when it occurs, is the result of the development of infiltrative carcinoma from the comedo carcinoma in the ducts.

Treatment: According to Foote and Stewart,⁸ the rational treatment for noninfiltrative comedo carcinoma is simple mastectomy. It would appear to us that this is logical, because in this stage there is no likelihood of vascular invasion; hence, metastasis cannot occur. In many cases, however, simple mastectomy is not the practical method of treatment. The responsibility for determination of whether a given comedo carcinoma of the breast

is infiltrative or not is dependent entirely upon the pathologist. To examine adequately a given comedo carcinoma for determination of this point would require at least the making of semiserial

The tumor-forming variety shows a dense fibrous core intermingled and surrounded by hyperplastic mammary lobules undergoing progressive fibrosis (Fig. 2). The type which does not form a single

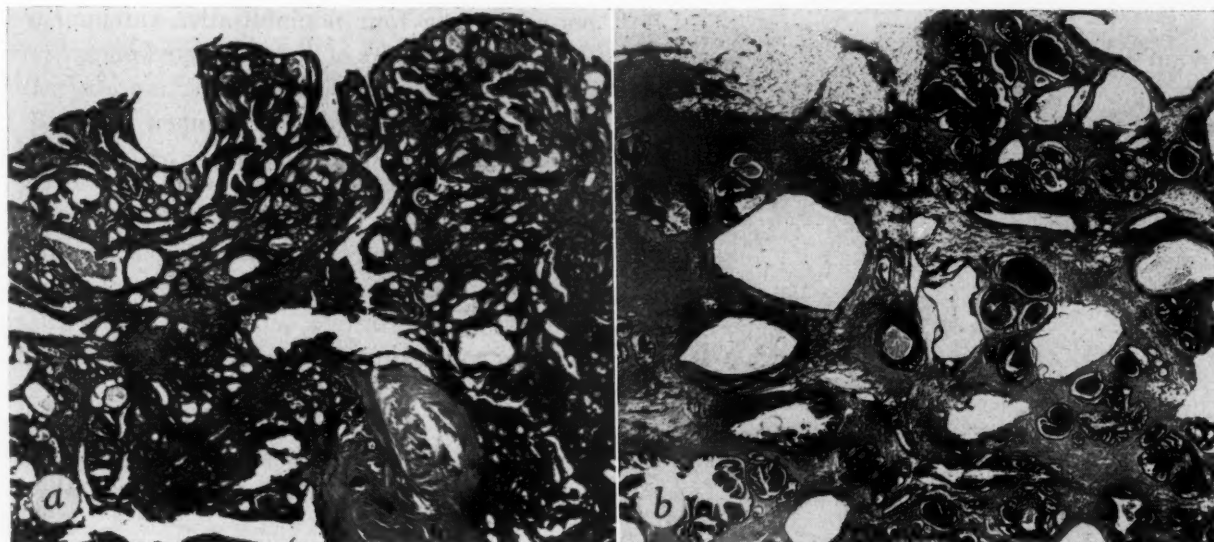


Fig. 3. (a) Single large intraductal papilloma situated in a duct near the nipple (hematoxylin and eosin; $\times 18$); (b) multiple microscopic papillomas associated with cystic disease of the breast (hematoxylin and eosin; $\times 6$).

sections, and since these lesions may involve a large area of the breast, this is impractical. Because of these practical difficulties in eliminating the possibility of infiltration, radical mastectomy usually is done. It should be remembered, however, that from a prognostic standpoint, it is the responsibility of the pathologist to determine the infiltrative or noninfiltrative properties of the lesion, so that the prognosis may be determined.

Diseases of the Breast Which Simulate Carcinoma Histologically.—In any group of carcinomas of the breast there are a certain number of lesions which histologically are of questionable malignancy, but which are regarded as malignant with the consequence that radical mastectomy is done. Among these lesions are sclerosing adenosis and the proliferative variety of cystic disease in which there is marked epithelial hyperplasia in the ducts, including the formation of multiple papillomas.

Sclerosing adenosis is a condition first described by Ewing in 1940. It is seen in two forms: (1) a palpable tumor mass which occurs clinically, and (2) multiple minute nodules situated throughout the breast and discovered incidentally during microscopic examination. The tumor form is less common, but it is important to recognize it, because of its gross and histologic similarity to carcinoma.

tumor mass differs in that it is less bulky. In both forms the disease is strictly benign.

Ductal papillomas occur in two forms: (1) those involving large ducts (Fig. 3a), usually evident grossly, either single or multiple and associated with serosanguineous discharge from the nipple, and (2) those which are found in smaller ducts as an integral part of proliferative cystic disease of the breast (Fig. 3b). Both types have aroused much discussion as to their benign or malignant nature. We feel that it has not been proved that either of these lesions becomes cancerous.

Comment.—Noninfiltrative comedo or intraductal carcinoma is a lesion which is the precursor of a certain number of clinical or ordinary carcinomas of the breast. Except when the lesion in question is associated with bleeding from the nipple or when Paget's disease of the nipple is present, there is no way to anticipate the presence of such a lesion clinically. This is unfortunate, because comedo carcinoma which is not infiltrating is a completely curable disease. It seems very questionable to us that the various types of proliferative disease of the breast, including sclerosing adenosis and cystic mastitis with the formation of multiple papillomas in the ducts, are the sources of formation of carcinoma in the breast.

Cervix

Noninfiltrating Carcinoma of the Cervix.—The concept that many clinical carcinomas of the cervix have a preclinical noninvasive phase (Fig. 4)

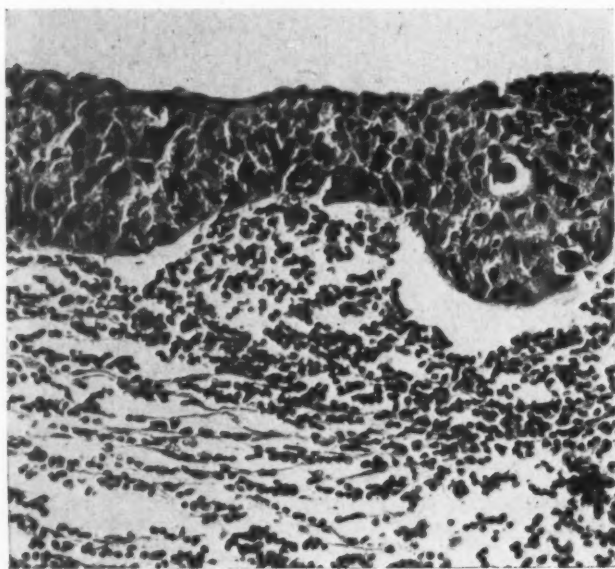


Fig. 4. Preinvasive carcinoma of the cervix. Squamous epithelium replaced by atypical cells, showing the cytologic characteristics of cancer. No invasion of underlying stroma (hematoxylin and eosin; $\times 200$).

has become apparent within the last two decades. At present it is not known how many carcinomas of the cervix go through this phase, but the concept offers interesting possibilities and possibly an approach to the cure of carcinoma of the cervix. Interest in noninfiltrative carcinoma has been stimulated by the smear technique of detection (Papanicolaou smears).

Schiller in 1927 wrote that the earliest phase of carcinoma is noninvasive, and that this early stage is of long duration. Smith and Pemberton in 1934 presented evidence obtained in four cases of clinical carcinoma of the cervix in which earlier biopsy revealed a previously unrecognized noninfiltrative carcinoma of four to twelve and a half years' duration.

Incidence: Pund and Auerbach found forty-seven instances (3.9 per cent) of carcinoma in situ in 1,200 surgically removed cervixes; they used serial block sections cut from the entire squamocolumnar junction of the cervix. None of these lesions were invasive carcinomas. Using multiple biopsies as the method of detection, Younge and associates, in a study of 995 routine surgical biopsies, found carcinoma in situ in eleven cases, an incidence of 1.15 per cent. In numerous cases,

noninfiltrative carcinoma of the cervix has been detected by the use of the smear technique. At the Vincent Memorial Hospital⁶ in 5,621 vaginal smears, thirty noninfiltrative carcinomas of the cervix were detected. Fremont-Smith in 1948 reported finding four noninfiltrative carcinomas of the cervix in a series of 358 unselected patients seen in office practice. Thus, in his series, approximately 1 per cent of asymptomatic women screened by the Papanicolaou smear technique had noninfiltrative carcinoma of the cervix.

Age: On the basis of the various series reported, it would appear that the average age of a patient who has noninfiltrative carcinoma in situ of the cervix is approximately six to ten years less than that of a patient who has clinically invasive carcinoma of the cervix. This adds further credence to the assumption that carcinoma of the cervix precedes the development of many clinical carcinomas.

Anatomic Distribution.—Most investigators believe that squamous-cell carcinoma of the cervix begins at or near the squamocolumnar juncture. However, it is to be noted in the studies of Foote and Stewart⁷ that the lesion may affect the endocervical canal and the deep glands of the cervix. Involvement of the mucous glands of the cervix was found in fifty-five of seventy-five cases reported by Galvin and TeLinde, an observation incorrectly interpreted by them as invasion. In Younge's experience of 135 cases, approximately 50 per cent of the lesions involved the endocervical glands. In only one case was the disease confined to the endocervical canal. This is important because in the majority of cases it is possible to visualize the lesion even though there are no diagnostic gross changes visible to the unaided eye. Younge and associates emphasized that the Schiller iodine test is very useful as a guide to the site of biopsy in noninfiltrative carcinoma of the cervix. The principle of this iodine test is that the normal squamous-cell epithelium of the cervix, because of its content of glycogen, will take up the iodine and stain it mahogany brown. The cells in a noninfiltrative carcinoma have little or no glycogen in them and do not take up the iodine; the area remains whitish. Other lesions besides noninfiltrative carcinoma will give a positive reaction to the Schiller test, but Younge suggested selecting the area adjacent to that in which a positive result of this test was obtained for a biopsy in search for a noninfiltrative carcinoma.

Evidence That Invasive Carcinoma of the Cervix Is Sometimes Preceded by Noninfiltrative Carcinoma.—Aside from the four cases of Smith and Pemberton in which this principle was illustrated, approximately fourteen cases have been reported

to involve some risk because of inability to define the limits of the tumor. Younger and others advocated careful evaluation in every case, especially when the patients are young women in the child-bearing age. They had treated 6 patients by means

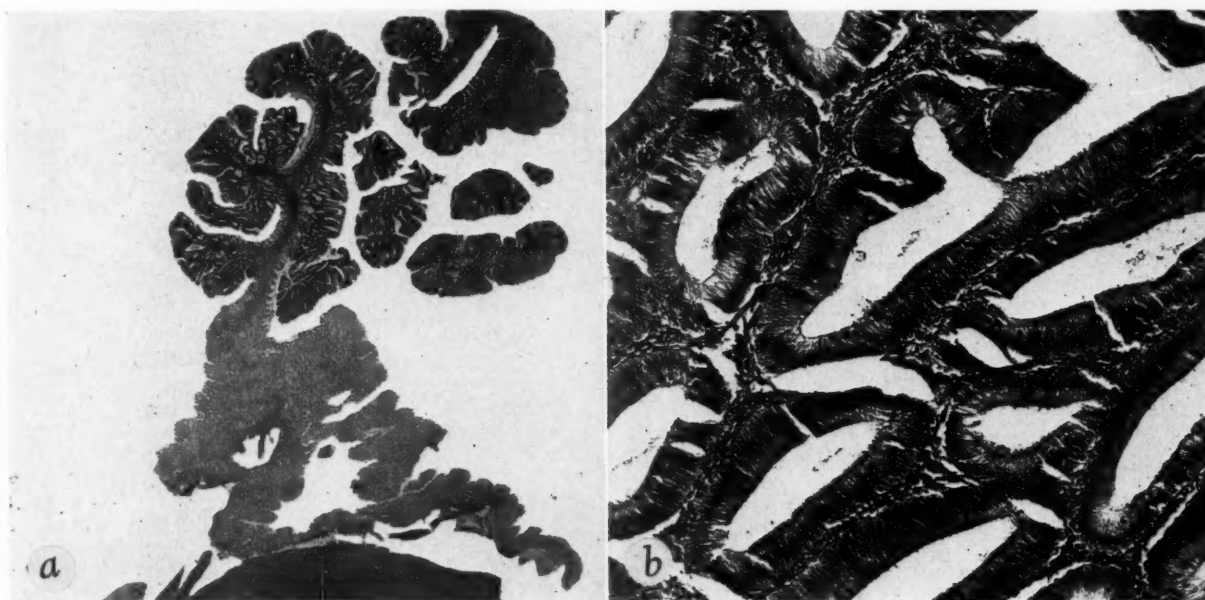


Fig. 5. Adenomatous polyp of the colon. (a) Section through an adenomatous polyp, showing no invasion of the stalk (hematoxylin and eosin; $\times 2\frac{1}{2}$); (b) section through an area near the tip of the polyp (hematoxylin and eosin; $\times 115$).

in the literature, making a total of eighteen cases in which a carcinoma in situ was followed by an infiltrative carcinoma. In many cases of this type which have been reported, the result of the original biopsy was interpreted as indicating benignancy, so that the lesion has been classified as noninfiltrative carcinoma only in the light of present knowledge. Younger and others described a case in which a noninfiltrative carcinoma of the cervix was diagnosed eleven months prior to amputation of the cervix. At the time of examination of the surgically removed specimen, a small invasive carcinoma (5 mm. in diameter) was found at the site of the specimen taken for the original biopsy.

Treatment: Various forms of therapy have been advocated. Galvin and TeLinde have treated their patients by means of modified Wertheim hysterectomy. Pund and Auerbach suggested that total hysterectomy, with preservation of the tubes, be employed. Foote and Stewart,⁷ on the basis of their anatomic study, felt that total hysterectomy, with preservation of the adnexa, was the procedure of choice. They wrote that the lesion could not always be eradicated by simple amputation of the cervix. Cauterization or conization was considered

of cauterization; all 6 subsequently became pregnant and bore children. In none of these patients did the lesion become invasive during the period of observation.

Comment.—Noninfiltrative carcinoma of the cervix undoubtedly is the precursor of the development of ordinary or clinical carcinoma of the cervix in a proportion of cases. It is impossible to determine what this percentage is. Noninfiltrative carcinoma may remain as such for many years. Until infiltration occurs the lesion is incapable of metastasis. There is no typical gross appearance of the lesion. It must be detected by the use of multiple routine biopsies or the Papanicolaou smear technique. If routine biopsies are to be employed, utilization of the Schiller iodine test may help.

Bowel

Adenomas of the Large Bowel.—Incidence: The incidence of adenomas of the large bowel is dependent upon the age of the patient, presence or absence of carcinoma and the care with which the bowel is examined. In a study by Helwig, in 1,460 consecutive necropsies there was a 9.5 per cent

incidence of adenomas of the large bowel. Atwater and Borgen studied the colons with a magnifying hand lens in 241 consecutive necropsies and found adenomas in 166 (69 per cent) of cases.

Relationship of Adenomas of the Colon to Car-

are formed are well differentiated, but in a rare instance they are more anaplastic (Fig. 6a and b). In spite of this histologic change, however, it usually is considered that until infiltration of wall of the bowel occurs, the lesion is incapable of metas-

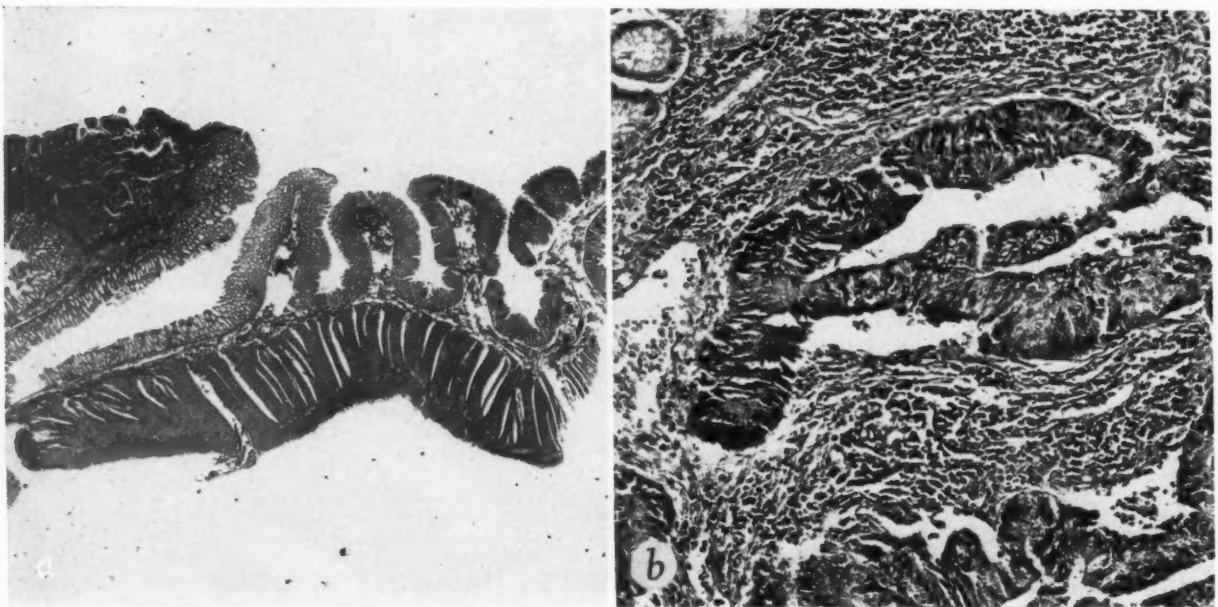


Fig. 6. Adenomatous polyp of the colon, with carcinoma at the tip. (a) Gross appearance, showing no invasion of the stalk (hematoxylin and eosin; $\times 4\frac{1}{2}$); (b) histologic section through carcinomatous area at the tip of the polyp (hematoxylin and eosin; $\times 115$).

cinoma: All studies indicate that adenomatous polyps of the colon are more common in patients who have or have had carcinoma of the colon than in the general population. Dukes, in an examination of thirty-three surgically removed carcinomas of the colon, found adenomas present in twenty-five cases (75 per cent). Helwig found adenomas in thirteen cases of twenty-five large intestines that contained obvious carcinomas. Mayo and Schlicke reported that the incidence of adenomatous polyps was 34.1 per cent in a group of patients who had carcinoma of the colon and rectum.

It can also be shown that adenomas progress to clinical cancers, particularly in multiple polyposis. This condition, which shows a marked familial tendency, usually manifests itself in early life. Hullsiek studied 128 cases of multiple polyposis, in forty-six of which clinical carcinomas developed.

A histologic study of adenomatous polyps of the colon will show that in at least 90 per cent foci of atypical glands can be found which histologically resemble carcinoma. These cellular changes resemble infiltrative carcinoma, and yet in the average adenomatous polyp there is no invasion of the stalk (Fig. 5a and b). Usually, the glands that

tasis (Fig. 7a and b). It would appear, therefore, that noninfiltrative adenomatous polyps of the colon can be regarded in the same light that noninfiltrative carcinoma of the breast and cervix are regarded.

Further evidence that an adenomatous polyp can become a carcinoma can be deduced from cases in which a known adenomatous polyp has become the seat of an infiltrative carcinoma. Brust, in a study of 87 cases of solitary adenomatous polyps of the rectum and sigmoid in patients who had refused treatment, found that in four who could be traced, carcinoma of the rectum and sigmoid had developed at the site of the adenomatous polyp.

Comment.—Evidence has thus been presented that adenomatous polyps are a frequent lesion of the colon, and that they increase in frequency with age. Histologic examination of these adenomatous polyps generally reveal foci of change comparable to the histologic aspects of adenocarcinoma of the colon. Since in their clinical behavior, adenomas resemble noninfiltrative carcinomas situated elsewhere, the generally accepted method of treatment is that of conservatism—transcolonic removal or

proctoscopic fulguration, except in those instances in which the multiplicity of the polyps precludes such treatment. Since infiltration of the wall of the bowel is the dividing line between benignancy and clinical malignancy, it is very important to deter-

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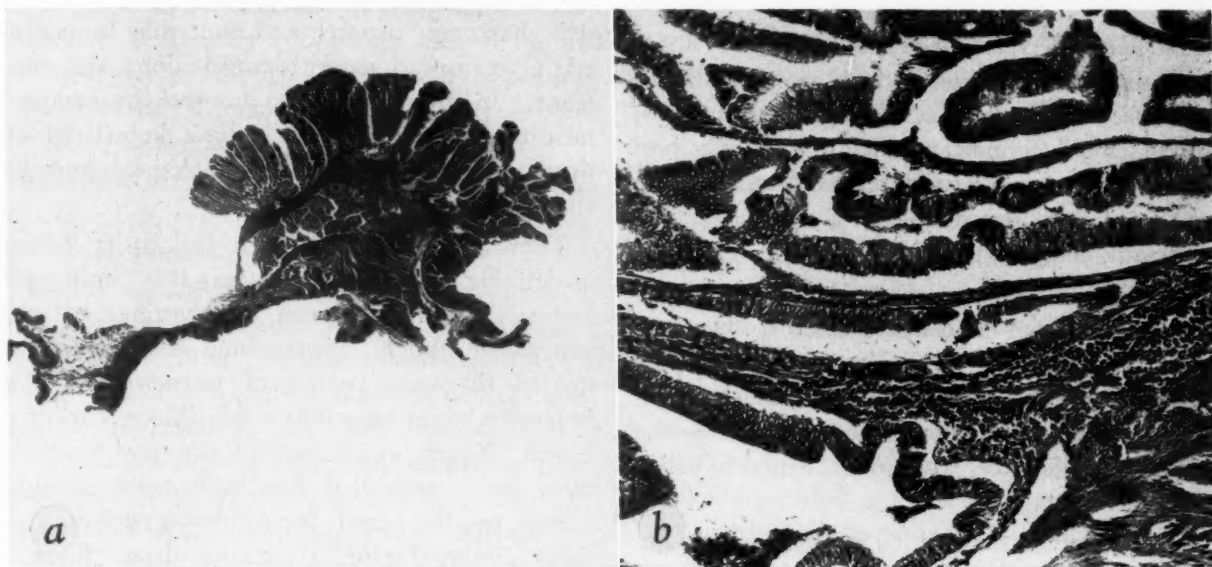


Fig. 7. Polypoid carcinoma of the colon. (a) Gross appearance, showing infiltration of the muscular wall (hematoxylin and eosin; $\times 1\frac{1}{2}$); (b) histologic section, showing infiltration of muscular wall (hematoxylin and eosin; $\times 115$).

mine whether or not infiltration of the wall of the bowel has occurred. As a general rule, it is easy for the surgeon or proctologist to determine this by testing the mobility of the stalk of the adenoma. However, whenever possible, the pathologist should examine the stalk to determine whether or not infiltration is present. When infiltration of the musculature has occurred, the lesion should be regarded and treated as an ordinary carcinoma of the bowel.

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MSMS

A two to five per cent increase in the cure rate of gastric cancer would save more lives than the cure of all patients with lip cancer.

• • •

At present only five per cent of all patients with cancer of the nasopharynx survive and are symptom free five years after therapy. If the lesion is treated while still localized, twenty-five per cent will survive.

Progress In Cancer Research

By John R. Heller, Jr., M.D.

Bethesda, Maryland

IN BEGINNING, let me emphasize a point about this discussion of cancer. It is an open discussion and I am pleased that it is open. Such a discussion is highly important and, in fact, is a prerequisite to progress against cancer itself. More than that, I think our discussion is a welcome sign of a drastic change in public attitudes.

Only thirteen years ago *Fortune* magazine published an article on cancer and titled it "Cancer: The Great Darkness." The most recent comparable publication, a series of articles in the *New York Herald Tribune*, republished this year by the Public Health Service, was titled "The Challenge of Cancer."

The contrast in these titles is noteworthy. Between the "great darkness" as the 1937 way of looking at cancer and the "challenge" as the 1950 way, there was a drastic and wholesome change in public attitudes. I doubt that anyone writing of cancer today would refer to it as a great darkness. This in itself is a significant indication of the progress we have made.

This change in attitude underlies the more tangible evidences of cancer progress that we can list today. For as long as the open discussion of cancer was shunned, it provoked only fear and apathy, and it could not be approached as a practical, scientific problem, or even as a practical medical problem. As long as the general attitude was one of hopelessness, one could neither expect the individual to seek medical attention for cancer nor the physician to diagnose and treat it on a rational basis. Although this avoidance reaction to cancer is still not entirely overcome, we can now make a progress report on cancer in the most favorable public and scientific climate that we have ever known.

Any summary of a single year's progress in cancer is apt to be disappointing. In this area, progress has come in little jumps, so that from one year to another it often seems barely perceptible. But taken over a span of years—for example the last

two or three decades—the advances in cancer research are impressive and gratifying.

Similarly, instead of pinpointing attention on developments in a single area, there are times when our focus needs expanding to the cancer field as a whole. Cancer progress—like cancer itself—has many aspects, and none may be neglected if we are to move forward along the entire front. In the long run, progress in cancer is measured by our advance in basic knowledge and in our understanding of physiological and biochemical processes.

There is still another way to look at it. Pasteur, in defining "science," wrote that it is "built up of successive solutions given to questions of ever-increasing subtlety, approaching near and nearer toward the very essence of phenomena." This statement seems especially applicable to cancer research. Nearly every method whereby other diseases were controlled has been tried—serologic techniques, the search for a microorganism, a decisive dietary factor, a curative drug. Some of these approaches still hold promise; but refinements inconceivable to the early workers seem necessary. We must continue to answer "questions of ever-increasing subtlety."

But we must remember that cancer is also a personal problem and a public health problem. The national cancer toll this year may exceed 200,000 lives. During the past half-century the cancer death rate has more than doubled—from sixty-four deaths for each 100,000 general population in 1900 to 135 in 1948. Despite continued progress in cancer research and medical care, there is every reason to believe that the problem will grow more acute in future years.

One of the challenging things about this is that we have enough medical knowledge and skill today to save almost half of those people if we could find and treat their cancer in time. To save the other half we must increase our basic knowledge.

In the past fifty years, cancer as a cause of death moved from eighth place to second place, surpassed only by heart disease. There are several reasons for this advance. Among these are better diagnosis and more accurate reporting of causes of death. Another and more important reason is that the major communicable diseases of a generation ago have largely been brought under control. In 1940, cancer mortality alone was greater than the combined deaths from tuberculosis, pneumonia and intestinal infections. With the decline of the

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communicable diseases, most Americans now survive until the middle and late years of life. It is in these years that cancer is most likely to occur.

In 1900 only 18 per cent of the American people were forty-five years of age and over. Today the proportion is more than one in four. In another twenty-five years, the proportion will be more than one out of three. Plainly, the increasing longevity of the population will expose more and more of us to the hazards of cancer.

Nevertheless, as we approach the cancer problem today I feel we can be optimistic concerning its eventual solution.

There is an ever-increasing extension of research activities on cancer, made possible by broad, intelligent public interest and professional support. Funds available for investigations on cancer have mounted tremendously since the close of World War II. Experimental data from many scientific disciplines crowd the literature. There are now four journals in the English language that are devoted exclusively to cancer. The Fifth International Cancer Congress, held three months ago in Paris, summarized many new research activities.

Broad advances are being made in the physical and biological sciences. Tools such as the cyclotron, the mass spectrophotograph, the ultra-centrifuge and the electron microscope make possible deeper exploration of the cell. The secret of cancer lies within the cell, and other tools which may lead us closer to that secret are the developing techniques of microchemistry and cytochemistry, isotope tracers and tissue culture.

But, to be specific, what are these advances? What are the accomplishments in the vital area we call cancer research?

With the understanding that we will come a little later to the subjects of diagnosis, and prevention, I should like to give you a brief review of some of the main lines of current cancer research, with special emphasis on findings that have been most productive. Some have directly increased our understanding of cancer, and some have provided new materials and methods to make possible investigations at a more advanced level.

Before the turn of the present century, cancer research workers were handicapped by a lack of available material for animal experimentation. This important need has since been met. Geneticists have been able to produce strains of animals sufficiently alike to permit a tumor from

one animal to be transplanted and continued in another animal, so that it can be studied indefinitely. Moreover, some strains of animals have been specially inbred so that they develop spontaneous tumors of specific sites with predictable incidence in generation after generation. Other strains have been inbred so as to be virtually free of certain types of spontaneous cancer.

The importance of these animals would be difficult to overestimate, for they figure in perhaps 90 per cent of cancer laboratory research.

What we know about cancer is by no means limited to findings based on animal material and clinical studies. Much has been learned from cancer epidemiology, the study of cancer in human experience.

The immediate objective of cancer epidemiology is to describe group characteristics associated with cancer, and, of equal importance, group characteristics associated with its absence.

The ultimate aim is to explain the natural history of cancer, and thus provide a rational basis for its prevention and control.

Since 1930 another important requirement for the laboratory study of cancer has been met—that is, a ready means of inducing it in animals. Twenty years ago a group of scientists in England isolated a pure chemical carcinogen from coal-tar. This discovery was followed by an intensive search for other chemical inciters of cancer. More than 300 chemical carcinogens have been identified. They range from very complex molecules to very simple molecules—and the only thing they have in common is their ability to cause cancer.

However, with the ability to produce cancer in the laboratory, all three sources of tumor material are fully available—spontaneous tumors, transmissible tumors, and tumors induced artificially with chemical agents. This standardized, dependable material has helped to put cancer research on a sound basis.

In the early studies of the geneticists, a primary purpose was to determine the role of heredity in the origin of cancer. Many believed that cross-breeding of animals would reveal a simple hereditary pattern. Actually, as we now know, the genetic factors of most types of cancer are multiple. Since man is not inbred, or reared under laboratory conditions, we cannot breed out cancer, nor can we predict—even if both parents have cancer of the same organ—whether the offspring will develop the disease.

However, some important by-products have come out of the genetic studies. One was the demonstration that mice of a strain with frequent breast cancer develop few tumors if nursed by mice of a low-tumor strain. This indicates that a factor of breast tumor development in mice is transmitted by the milk. In many respects the milk factor behaves like a virus, and progress has been made in attempts to define its nature. Recent experiments by Andervont of the National Cancer Institute indicate that the so-called milk factor can be transmitted to some extent by the male as well as the female.

Other virus cancers in animals have been extensively investigated. But as yet, there is no evidence of a virus tumor agent in human beings.

Among other influences in the development of cancer, we may cite hormonal imbalances within the body. The relation between cancer and hormones is well established by facts such as these: (1) hormones influence normal growth; (2) cancer of the prostate may be inhibited by reduction of male hormones (by castration) or by addition of female hormones; (3) reduction of male or addition of female hormones may promote cancer of the breast; (4) reduction of female or addition of male hormones may inhibit cancer of the breast; and (5) there is a similarity in chemical constitution between certain hormones and cancer-causing agents.

We have experimental evidence that, in general, the incidence of tumors in mice can be lowered by placing the animals on restricted diets. Investigations at the National Cancer Institute suggest the possibility that anti-vitamin compounds might retard the growth of cancer in tissues controlled by hormones. As leads in cancer research, these and similar dietary findings are highly encouraging.

Cancers have certain properties and characteristics in common which are not common to normal body tissues. In early days, the only differences that could be observed between cancer and normal tissue were structural—they looked different. But with the advance of biochemistry in recent years, it has been proved that cancer and normal tissue have important chemical differences. One of these is a difference in the manner of breaking down carbohydrates to release energy. Another difference is found in the distribution of enzymes—the chemical substances that control digestion, conversion of foods to energy, and other life processes. Differences in the tissue enzymes may make the

difference between normal growth and cancer. Biochemists are emphasizing enzyme studies, in an effort to distinguish differences that would lead to improved methods of diagnosis or treatment.

In studies of biochemistry, it is desirable to relate a specific tissue function with the responsible component of the cell. Accordingly, refined techniques are increasingly applied to the study of cell fractions isolated by the high-speed centrifuge. These studies of the enzyme activity of cellular particles are made in conjunction with electron microscope studies of structure within the cell. By means of these techniques, it has been shown that certain enzymes are carried by specific particles in the cell, and electron microscope studies have shown that the structure of those particles is altered in tumors.

The development of these biochemical techniques has established a firm groundwork for investigations on an increasingly subtle level. Meanwhile, it is well to remember that in many diseases the cause and mechanism were unknown when effective means were discovered for prevention and control. What I am saying is, a full knowledge of the cancer process is not essential to productive research in cancer treatment.

A number of advances in experimental therapy can be cited. Some of the radioisotopes—particularly radioiodine in the treatment of some thyroid tumors and radiophosphorus for chronic leukemia—have been tested. At the present time, their usefulness is limited. Radiocobalt still shows some promise as a cheap and abundant substitute for radium, but a great deal of clinical investigation is necessary before it can be evaluated.

A number of drugs—the nitrogen mustards, urethane, stilbamidine, pentamidine—have been shown to have a palliative effect in certain types of cancer.

The nitrogen mustards seem to deserve a place in the treatment of Hodgkin's disease, polycythemia, lymphosarcoma, and perhaps some cases of chronic leukemia. These agents are highly toxic and produce only temporary remissions.

Urethane has been found effective in chronic myelogenous leukemia and, to a lesser degree, in similar conditions. In early cases, remissions lasting a few months may be obtained, but when the drug is discontinued, sudden relapse occurs. In advanced cases, this agent is inferior to radiation.

Stilbamidine and pentamidine have been shown to have some effect in multiple myeloma. In con-

junction with a low protein diet, these agents relieve pain and temporarily retard the disease.

Folic acid antagonists—such as aminopterin—have produced temporary remissions in leukemic animals and in a few children with acute leukemia. But these agents are highly toxic and are not recommended as yet for use by the practitioner.

Estrogen is of value in the treatment of cancer of the prostate, and androgen or estrogen in breast cancer. I would like to emphasize that hormonal treatment in cancer is only palliative.

Another promising approach to the development of chemical agents for cancer therapy is the systematic screening of compounds known to damage cells. In an extensive, five-year program under the direction of Shear at the National Cancer Institute about 2,500 chemicals have been tested. More than 100 were found to be damaging to cancers (Sarcoma 37) in experimental animals. With the screening program brought to a close, we are intensifying studies of the 100 or more compounds that we have found damaging to cancer. Two such promising compounds are alpha- and beta-peltatin, both derivatives of podophyllin.

To sum up, a number of chemicals have shown definite objective effects on certain types of cancer in man. However, the effects thus far are of a temporary alleviative nature—and the cure of cancer still remains firmly with surgery and radiation therapy.

These advances are encouraging and useful, we all agree. But they do not give us the solution to one big, immediate problem—the problem of diagnosis. We are at work on that. There is an urgent need for a diagnostic test which can be applied in any community on a mass basis at reasonable cost and sufficiently specific to identify a high percentage of cancer cases at an early stage. For more than a year, a program has been under way to re-evaluate all reported tests for cancer, and, if possible, to devise new ones.

I think that the cold facts about diagnostic tests will soon begin to emerge. Whatever the facts show, whether any specific test is useful, the people have a basic right to know.

Cancer morbidity surveys of ten American cities, (Atlanta, New Orleans, Birmingham, Dallas, Detroit, San Francisco, Denver, Chicago, Pittsburgh, and Philadelphia), have just been completed. Although I cannot discuss their results at this time, I can tell you that these surveys re-emphasize the

importance of the varied programs directed toward achieving early case-finding and early diagnosis.

To an undetermined extent, cancer can be prevented. In industry, agriculture, and professions we find various carcinogenic agents—of a physical, chemical or parasitic nature—which result in cancers at a wide variety of sites. The first essential in controlling environmental cancer is to determine the extent of the problem, in terms of specific industries and areas.

Through experimental cancer surveys, co-operating state agencies are analyzing cancer deaths and relating them to type and length of employment. This information is being correlated with surveys of local industries. As an example of the kind of information we are getting, I might tell you about a chromate plant in New Jersey. Of 150 workers with an exposure of at least six months and an interval of four or more years since the first exposure, twenty-five are now dead. Five of them died of lung cancer, one of leukemia, and one of intestinal cancer. This is a small group, but the incidence rate is so many times higher than for the general population that it is fairly certain a real carcinogenic hazard has been identified. Similar investigations are taking place in the steel industry, the oil industry, tar and pitch, and others. I think we are making rapid progress in this area.

In this review of progress in cancer research I have tried to present the problem not as a dark mystery but as a problem requiring—and getting—practical approaches. As we have seen, there is substantial progress to report. Investigation is being pursued on a scale unknown just a few years ago. New or improved techniques of diagnosis and therapy have instilled a measure of hope and confidence in both the physician and the patient that cancer is not necessarily a death sentence. There is every reason to believe that cancer is a practical, solvable problem. By vigorous extension of our efforts, I am convinced we can go far in the control of cancer. By continuing to support these efforts as long as necessary we can reduce the cancer problem to a more tolerable level.

MSMS

Carcinoma of the vulva is often misdiagnosed and inadequately treated. The lesion is radioresistant and complete vulvectomy, with dissection of the superficial and deep inguinal and femoral lymph nodes, is the accepted treatment.

Radiation is not only useless but can be harmful in carcinoma of the liver.

What is a Practical Cancer Detection Program?

By Frank L. Rector, M.D.
Jackson, Michigan

IN THE ABSENCE of a demonstrable causative agent, such as is found in bacterial and parasitic diseases which permits of ready identification of the guilty agent, the discovery of cancer rests upon more complicated and time-consuming procedures.

With no blood or other specific test of dependable accuracy, the origins and sites of cancer must be painstakingly searched for. The physical examination, plus its adjuncts of biopsy, x-ray, and clinical laboratory procedures, must be employed in this search. These all require time.

As the population becomes an older one, more cancer will develop. As diagnostic facilities and abilities improve, more cancers can be found in earlier and curable stages. Note, please, I said "can be found"; this does not mean they will be found. Unless and until the general public, as well as the medical profession, more fully appreciate the value of periodic medical examinations and the necessity for closer co-operation in diagnostic and treatment procedures, unnecessary handicaps will continue to hinder the progress of cancer control.

Utopians dream of the time when everyone will have an annual or even a semi-annual examination for cancer; when an advanced cancer will be a curiosity as rare as a case of typhoid fever or cholera, and when the cancer death rate will be of minor importance. There are also those who tend to the opposite pole of thought; that cancer will increase in frequency and the death rate will mount steadily. The practical outlook rests, probably, some place between these extremes.

The number of cancer detection or other medical examinations possible at this time or in the immediate future is restricted to the number that can be squeezed into the physician's working day. Let us indulge in a few mathematical calculations of a theoretical nature to appreciate the enormity of the problem of mass physical examination pro-

grams and to suggest a practical solution. It would require thirty-six weeks for 100,000 physicians making three cancer detection examinations daily, five days weekly, to examine once that portion of the population thirty-five years of age and older. The amount of time required would depend on the extent and thoroughness of the examination. Complete examinations would utilize practically all of the examining physician's time, leaving no time for his regular practice. By confining the examination to those sites where 60 per cent of all cancer is found, a far greater number of cancers would be discovered in the time available for this work. True, some cancers would be missed by this type of examination but, for the time and labor expended, more cancers can be found and more lives saved by this selective examination than in any other type of detection program yet offered.

It is realized that this selective examination is not the ideal plan, but what is the alternative? It is not in more thoroughly examining fewer persons. Is not the most practical solution an increase in the number of physicians? Although this country has had for many years the highest ratio of physicians to the population of any country in the world, voluntary health and hospital insurance services, plus new diagnostic and treatment methods and facilities, have made ever-increasing demands on the physician's time. Medical leaders recognize the need for more physicians, which need can be met only by an expanded medical training program. Slow progress is being made because of lack of facilities and teachers. The life-saving value of the cancer detection examination program may well be one incentive to provide the increased number of physicians needed.

By restricting examination to older age groups, more cancers could be found in the same length of time but would the socio-economic returns be as great? In general, the cure of a cancer at age forty offers more of benefit to society than does such a cure at age sixty or above. The problem then becomes one of selection of type and extent of examination to provide the greatest service to the community, in keeping with the time physicians have available for this work.

Under stimulation of the American Cancer Society, cancer detection centers have been organized in many states. While a wide variety of conditions governs the operation of these centers, they are designed to offer medical examination of apparently well persons to detect the presence of an early

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Read at the Seventh Annual Meeting, Public Health Cancer Association of America, St. Louis, Mo., October 30, 1950.

PRACTICAL CANCER DETECTION PROGRAM—RECTOR

and unknown cancer. They are housed in a hospital or in specially equipped quarters convenient to the population they are designed to serve. They are serviced by lay workers and are staffed by local physicians. They are in operation for restricted periods, varying from daily to monthly meetings of a few hours each. Examinations are restricted to previous appointment. Extent of the examination varies from a complete examination requiring two or more visits to the center, to a rather cursory examination without laboratory aids. In the latter cases, any suspicion of malignancy usually concludes the examination with reference of the examinee to his family physician for completion of the diagnosis and such treatment as may be indicated.

The type of cancer detection program just described has made a lasting contribution to the discovery of early cancer. It has shown both laity and physicians the value of a careful medical examination as an early case-finding procedure. As educational and demonstration programs they should be continued, probably in connection with medical teaching institutions. As community service programs to significantly lower cancer morbidity and mortality, they have a limited value as none of them, as far as my knowledge goes, is serving as much as one per cent of the tributary population. A nationwide survey of these detection centers by the American Cancer Society, revealed that cancer was found in .8 per cent of 51,728 examinations.

The last few years have seen a variety of plans devoted to the finding of cancer in early stages. Macfarlane in Philadelphia, and L'Esperance in New York were among the earliest to undertake such studies. Each of these workers began her studies as a search for cancer in restricted sites rather than as a complete medical examination. Macfarlane examined the female pelvis only; later, her program was enlarged to include the breast. L'Esperance began by examining women only; now both sexes and all ages are accepted at her clinics in Memorial Hospital, New York.

Even more highly specialized types of detection examination are being carried on, largely as research programs. Among the earliest of these was the gastric cancer study by St. John and associates in New York and restricted to persons over fifty years of age in which three gastric malignancies were found in 2,413 examinations. State, at the University of Minnesota, has reported eleven can-

cers in 1,544 gastric examinations, also in patients over fifty. At the Cancer Detection Conference in Portsmouth, N. H., last year, it was reported that 100,000 chest roentgen examinations uncovered but sixteen cancers; that in 6,000 cervical examinations, nine cancers were found. King, of Delaware, reported that twenty-two cancers (1.1 per cent) were found in 2,000 examinations of the breast, pelvis and rectum of women over forty.

The results of these and other similar studies emphasize two important things: (1) that cancer can be found by careful examination before it has made itself known to the patient, and (2) that the finding of early cancer is in any case a prolonged time-and-labor-consuming experience to say nothing of the costs involved. As life saving is, or should be, the fundamental objective of all such undertakings, the problem then resolves itself into finding some way of increasing the number of cancers found by a given expenditure of time and labor. Cancer detection programs should be keyed to finding the largest possible number of cancers during the time available for this work. Surveys have shown that more than half of all cancer occurs in sites readily available for examination without elaborate or expensive equipment. The oral cavity, skin, breast, female pelvis, rectum and prostate are easily examined and will yield a much higher percentage of cancer for the time and labor involved than will the examination of any other equal combination of sites.

It has been argued that by restricting examination to certain sites other and equally dangerous areas are excluded. The stomach, lungs, and other internal organs, while important, require much more time for examination than do the sites listed above. The same amount of time spent on accessible sites will yield a much greater number of cancers, thereby increasing the number of lives that can be saved.

Another argument for confining the primary examination to accessible sites is that cancer found in these organs lends itself to cure in a much higher percentage of cases than does cancer in many internal organs. There is no satisfactory method known today for finding cancer of many internal organs in early and curable stages.

A carefully taken and evaluated history of the patient is a necessity in any cancer detection examination. Where such a history is lacking or is taken by some one other than the examining physician and who may not even be a physician, a

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splendid opportunity is lost for evaluating the patient's general health background, to say nothing of definite cancer leads that may be uncovered.

To further extend the benefits of special examinations, two or more community health programs can be combined as case-finding procedures. For example, a rare opportunity exists through the tuberculosis chest x-ray survey program to obtain information on lung cancer which in some areas has been found more often than has tuberculosis. Every effort should be made to co-ordinate the cancer and tuberculosis case-finding programs so that one examination will serve both purposes. By sharing expenses the cost per examination for either disease also would be substantially reduced.

An example of the selective type of cancer detection examination that is attracting national attention is the Hillsdale Plan for Tumor Detection, so-called from the medical society in Hillsdale County, Michigan, initially sponsoring the program. Hillsdale is a rural county of 30,000 population of better than average economic status. Under this plan, any one desiring a cancer detection examination makes an appointment with his own physician for the examination during the physician's regular office hours. Primarily, the examination covers the oral cavity, skin, breast, female pelvis, rectum and prostate, and requires approximately one-half hour to complete. However, if the history or the initial examination uncovers suspicious conditions in other organs, they are included. Biopsy and x-ray examinations are made when indicated. Cancer of the stomach, cecum, colon, and metastatic growths in the lungs, bones, and glands have been found in addition to those in the sites always included in the examination. Realizing that one negative examination has no lasting value, semi-annual re-examinations are encouraged and in many cases are made.

In the first two years of operation of this plan, cancer was found in 3.75 per cent of the 1,721 persons examined. This is a much higher return than the .8 per cent reported in the American Cancer Society's national survey of detection centers.

Examinees under the Hillsdale Plan are not restricted in any way. All ages and both sexes are accepted. Only those cases are reported that are being diagnosed for the first time. In other words, the patient—while he may have known something was wrong—did not know previous to his exam-

ination that he had cancer. The cancers found in this group of examinees, when classified by stage of development, showed 63 per cent to be in a stage lending hope for cure. In another group of cancers found in patients ill at home or in the hospital when examined, but 37.5 per cent were classed as hopeful for cure.

To date, two important results have come from the Hillsdale Plan: (1) more than 17 per cent of the women of that county over the age of forty have had one or more examinations, (2) the participating physicians have developed a keener interest in the cancer control program and a greater proficiency in cancer detection. Both the public and the profession are profiting from this undertaking. This plan will work in any community if and when the public and the medical profession seriously and co-operatively strive to that end.

As reports on all cancer examinations in Hillsdale County are filed with the local health department, a body of local cancer morbidity statistics is gradually accumulating. This is a worth-while part of this program but the desire for statistics is subordinated to the desire to render the fullest possible service to the community. Statistics, as such, do not save lives, while the finding of early cancer does.

The cancer-detection program in Hillsdale County has always been considered a part of the regular medical service rendered by the physicians to the community. The question of a special uniform fee for these examinations has never been considered, the patient paying for the service rendered just as he does for any other type of medical service.

As with all similar physical examination programs, a large number of disabilities other than cancer is found under the Hillsdale Plan. These have not been included in reports of the Plan's operation but they receive appropriate medical attention in which the county health department co-operates when the situation warrants. As a consequence, it is believed that the working of the Hillsdale Plan for Tumor Detection represents an example of the practice of preventive medicine at its best.

In conclusion, the following facts seem to deserve emphasis:

1. Cancer detection examinations of the entire adult population are not possible for lack of physicians and lack of public interest.

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Virus as a Cause of Human Cancer

By John E. Gregory, M.D.
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IN 1882 Koch surprised the entire medical world when he proved that tuberculosis was caused by a germ. The medical men of that time were both surprised and extremely skeptical because it had apparently been proved that everything bad, such as bad air, bad nutrition, et cetera, was the cause of tuberculosis.

It is to be hoped that our readers will not be equally skeptical of certain facts to be presented here on the subject of cancer.

As an introduction to this subject, everyone is reminded that the one malignancy best understood in animals is chicken sarcoma, which is caused by a virus. This was established by the outstanding work of Rous.

In 1933, cancer of rabbit skin was proved to be due to a virus by Shope.^{14,15}

In 1934, cancer of the kidney in the frog was proved to be due to a virus by Lucke.¹²

Let us also review the subject of cancer in the mouse. For decades, breeding experiments with mice practically proved beyond question of doubt that breast cancer in these animals was due to an hereditary factor. In 1940, this was proved to be a factor which was transmitted through the milk. This milk factor appeared to be a virus, for only extremely small amounts (0.2 c.c.) was necessary to transmit the disease. It passed through the Berkfeldt filter and could be destroyed by pasteurization.^{1,2,3} Consequently, the fact that a virus caused breast cancer in the mouse was accepted by most researchers.

In an experiment, mice with the milk factor present were castrated at from one to three days of age, and all developed cancer of the adrenals. The same experiment was repeated on cancer-resistant animals. They only developed a hyperplasia of the gland.^{18,19,20}

Another experiment was made by transplanting the ovaries into the spleen of mice with the milk factor present. Cancers of the ovaries consequently developed. The same experiment done on cancer-resistant mice produced no cancer.

Methyl-cholanthrene was put on the skin of mice with the milk factor present, and cancer of

the skin developed. The same experiment done on cancer-resistant animals did not produce cancer.

Plutonium given by mouth to mice with the milk factor present produced sarcomas of the intestinal tract, and when given intravenously, produced sarcoma of the bone.⁴ When this experiment was repeated on cancer-resistant animals no malignancy developed.

Now it appears evident that this milk factor (or cancer virus) not only produces cancer of the breast but also malignancy of any tissues, depending on the hormonal physiology which is upset or on the location of irritants.

Vernon Riley, at the National Cancer Institute in Bethesda, Maryland, has concentrated the virus of breast cancer in mice.¹³ Then after greatly diluting it and injecting it into mice he was able to produce malignancies even when only 40 virus were injected. In a malignant melanoma he was also able to show that these granules are enzymatically active. This may be the enzyme link in cancer research.

Cancer in the mouse is identical microscopically, grossly and clinically to cancer in the human. Is it not logical to believe that the pathogenesis is likewise identical?

Now in our work, human malignant tissue was taken directly from surgery, and with absolutely sterile technique, ground up completely, diluted with triple-distilled water and made into a Berkfeldt filtrate. This was examined under the electron microscope, and virus-like bodies were found in 100 per cent of the malignant tissue. These objects were not only spherical in shape and the size of virus, but also had cell detail including cell wall, nucleus and cytoplasm. They could be seen in the process of cell division with the cell wall surrounding two nuclei. This virus was cultured, not only in eggs, but also on agar.

If a normal saline solution is used in making the tissue extract, practically no virus will come through the Berkfeldt filters, for the salt salts the virus out in the candle.

The virus may appear larger when prepared in this way and dried on a slide than it does when examined in the tissue. In addition the virus detail shows up better.

Figure 1 shows electron microphotographs of cancer virus.

Over 1,000 human malignant tissues have been examined and this same virus was found in all of them. One thousand normal tissues and benign

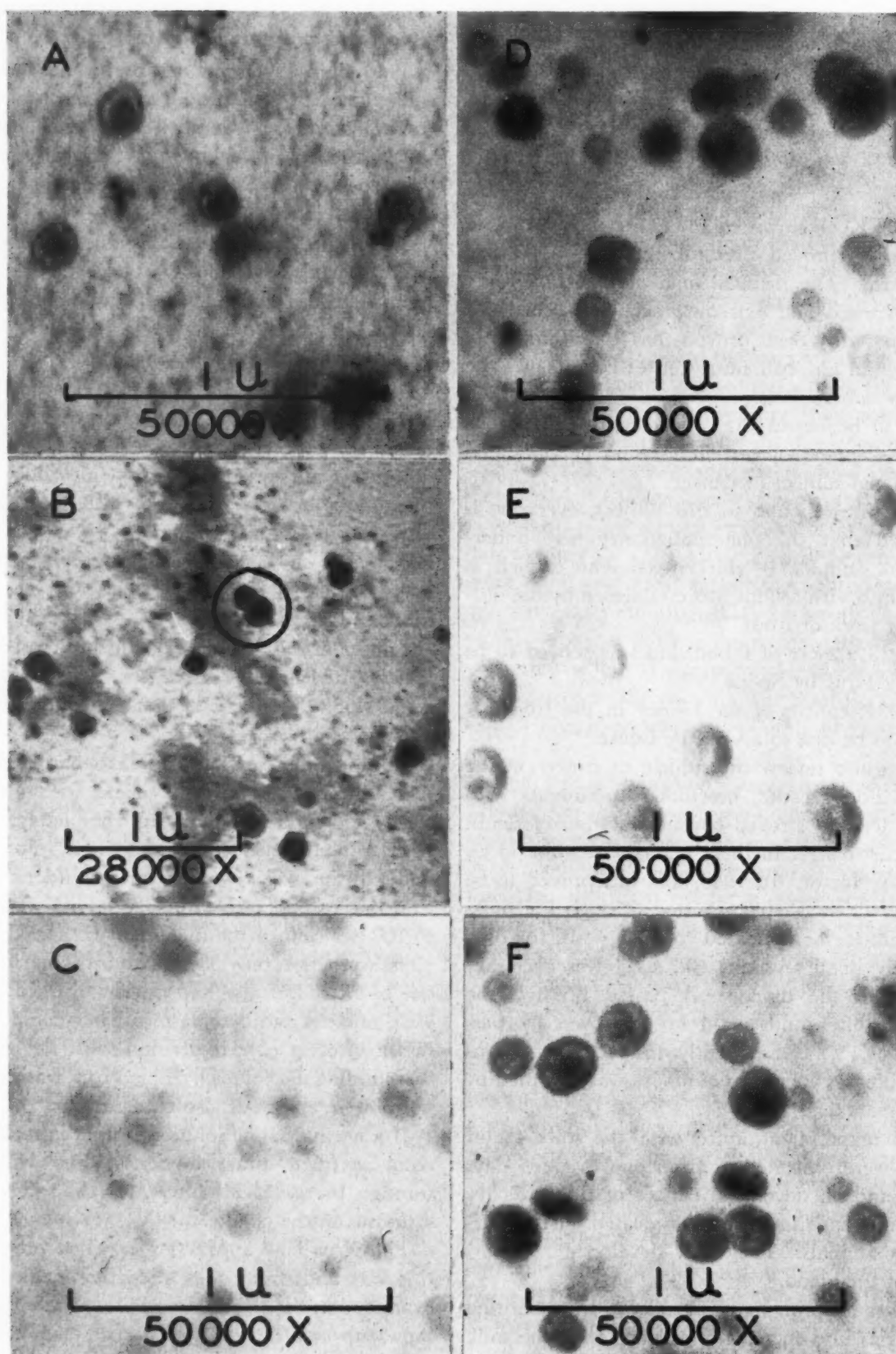


Fig. 1. (A) An electron microphotograph of virus from human cervical carcinoma. (B) An electron microphotograph of virus from human malignant melanoma. (C) An electron microphotograph of virus from egg culture of human malignant melanoma. (D) An electron microphotograph of virus from mouse breast carcinoma. (E) an electron microphotograph of virus from stock culture of chicken sarcoma. (F) An electron microphotograph of virus from human breast carcinoma.

tumors were also examined but no virus was found. This proves that these bodies are not artifacts. J. D. Fox,⁵ working under a Federal grant, has verified this work. Claude and Fullman, and Gesler⁶ and Grey have also found this virus in cancer tissues. Further, the fact that these virus-like bodies found have also been cultured is absolute proof that we are dealing with living virus.

A question now arose. Is this virus a product of cancer or the cause of the disease? Consequently, cultures of this malignant melanoma virus were injected into mice and baby chickens. In 25 per cent of the injected animals, there developed cancers which included cancer of the ovary, breast and stomach, spindle cell sarcoma, myosarcoma and leukemia. A control group, ten times larger, developed no malignancies. Further, the virus isolated from the developed malignancies was the same as that injected. This carries out all the criteria of Koch's postulate.

An additional experiment was performed to rule out the possibility that the tumors were caused by the transmission of a chemical agent. This virus was heated to 56° Centigrade for one hour and then injected into twice as many animals as before, but no malignancy developed. This proves that it is life in the virus which produced the malignancies.^{8,9,10}

If the above statement is true, there should be serological evidence of this virus. Human cancer virus was injected intraperitoneally into cancer-resistant mice. After two weeks the mice were killed. The livers were removed and a complement fixation test was run with the virus against the liver filtrate. The test gave positive results and proves that specific antibodies for the virus were developed in the liver. This is a typical reaction of virus.

On this basis a complement fixation test for cancer was developed, using cancer tissue filtrate as antigen against human serum. This test has proved so far to be 88 per cent diagnostic for cancer. (Note: It is most important that absolutely clean cancer tissue be used. Cancer of the intestinal tract and their metastases will not work because of the presence of contamination by other organisms. Non-contaminated cancer of the bladder has been the most satisfactory.) This presents serological evidence that human cancer is due to cancer virus and not to just any virus.

In addition, if cancer is caused by a virus, it should be possible to develop an antibiotic. To

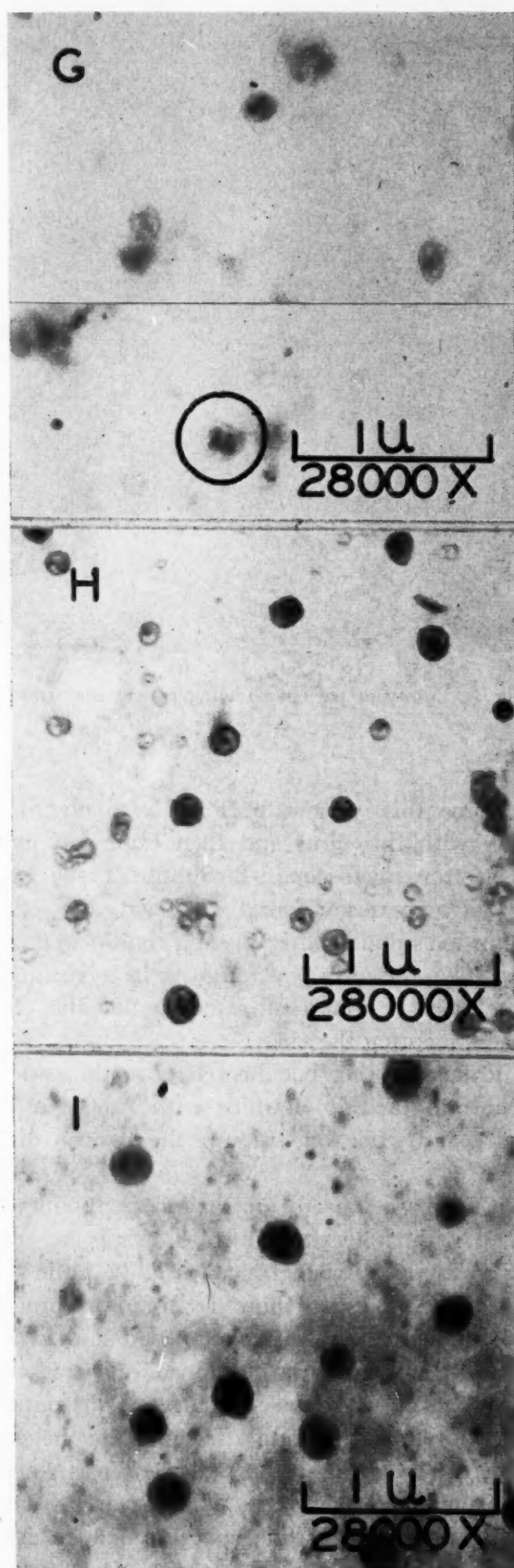


Fig. 2. (G) An electron microphotograph of virus from human carcinoma of uterus. (H) An electron microphotograph of virus from buffy coat of human leukemia cutis. (I) An electron microphotograph of virus from egg culture of ulcer of human leukemia cutis.

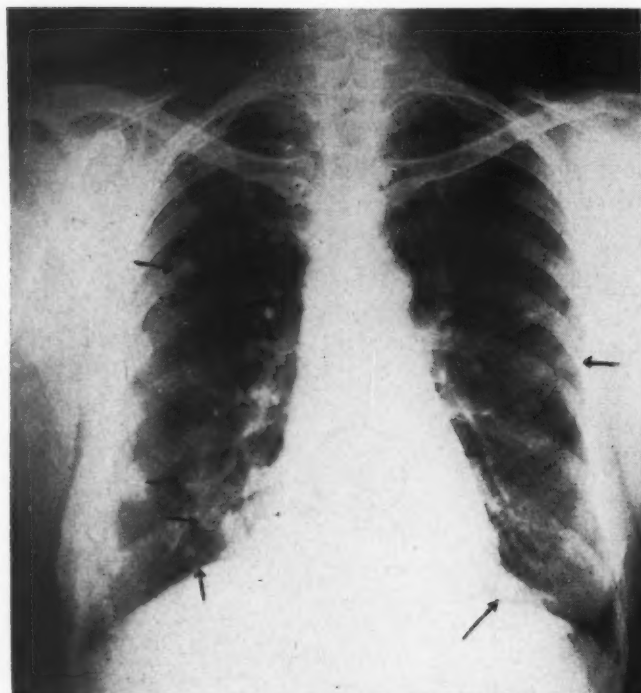


Fig. 3. X-ray of patient showing cancer metastases in lung.

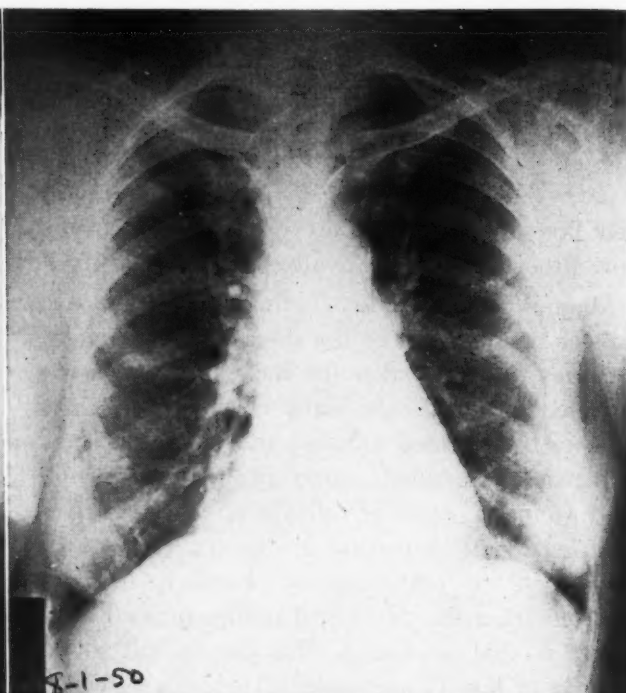


Fig. 4. X-ray of patient four and one-half months later, after treatment with Magnesium Tracinate, showing no metastases.

determine this, various bacteria were placed together with this virus and then examined under the electron microscope. *B. Subtilis* Tracy I was the only organism found to have any effect. Within ten minutes after placing them together in a test tube, the virus was found to be agglutinated to the bacillus. One hour later, the bacillus could be seen ingesting the virus.

Filtrates of this bacillus were made and injected into the hip of mice with cancer of the breast; and after one month the cancer disappeared.

On this basis, far-advanced cancer patients were treated with a Berkfeldt filtrate of this organism which was given hypodermically daily for one year. Most of these patients showed satisfactory progress as far as the cancer was concerned, but their kidneys failed, albuminuria developed, and treatment had to be stopped. However, three of the patients never developed albuminuria and are in good health two years after the treatment was started.

This material was later purified, and from it was isolated a crystalline substance called Magnesium Tracinate. It has never produced albuminuria. This Tracinate still retains most of its antibiotic effect against cancer virus.¹¹

Seven cases have been reported of far-advanced malignancy which were treated only by the use of

this substance. These patients had been given only from one to eight weeks to live. At the present time, one to two years after treatment was started, they show no evidence of the disease. These cases were carcinoma of cervix, carcinoma of skin, multiple myeloma, lymphosarcoma, chronic leukemia, malignant melanoma and sarcoma of the uterus. Likewise, both a case of acute leukemia (two years' duration) and a case of Hodgkin's disease were also treated and now show no evidence of the disease.¹¹

In Figures 3 and 4 are chest x-rays of a patient with a large cancer of the stomach with metastases to the lung. This patient, a woman, when first seen in March, 1950, had lost 25 pounds in weight and had a large palpable tumor of the stomach. X-rays showed a 2-inch filling defect in the stomach. She vomited most of the time and was slightly jaundiced. The first chest x-ray, taken March 20, 1950 (Fig. 3), shows many distinct metastases. The only treatment since has been 10 mg. of Magnesium Tracinate hypodermically daily. Now, after five months, she appears in good health, has gained all her weight back, has a good appetite and no nausea or vomiting. A chest x-ray, taken August 1, 1950 (Fig. 4), shows no metastases. A complete gastrointestinal series and chest x-rays taken November 1, 1950, by Dr. Delos Comstock

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(radiologist) show everything normal with no evidence of cancer. This restoration of normal health is definitely an antibiotic effect. When *B. Subtilis* Tracy I shows no destructive effect on

Taylor and others have transplanted carcinomas, and have developed sarcoma at the point of contact.^{16,17} This different cell-growth developed shows that there is something else present within

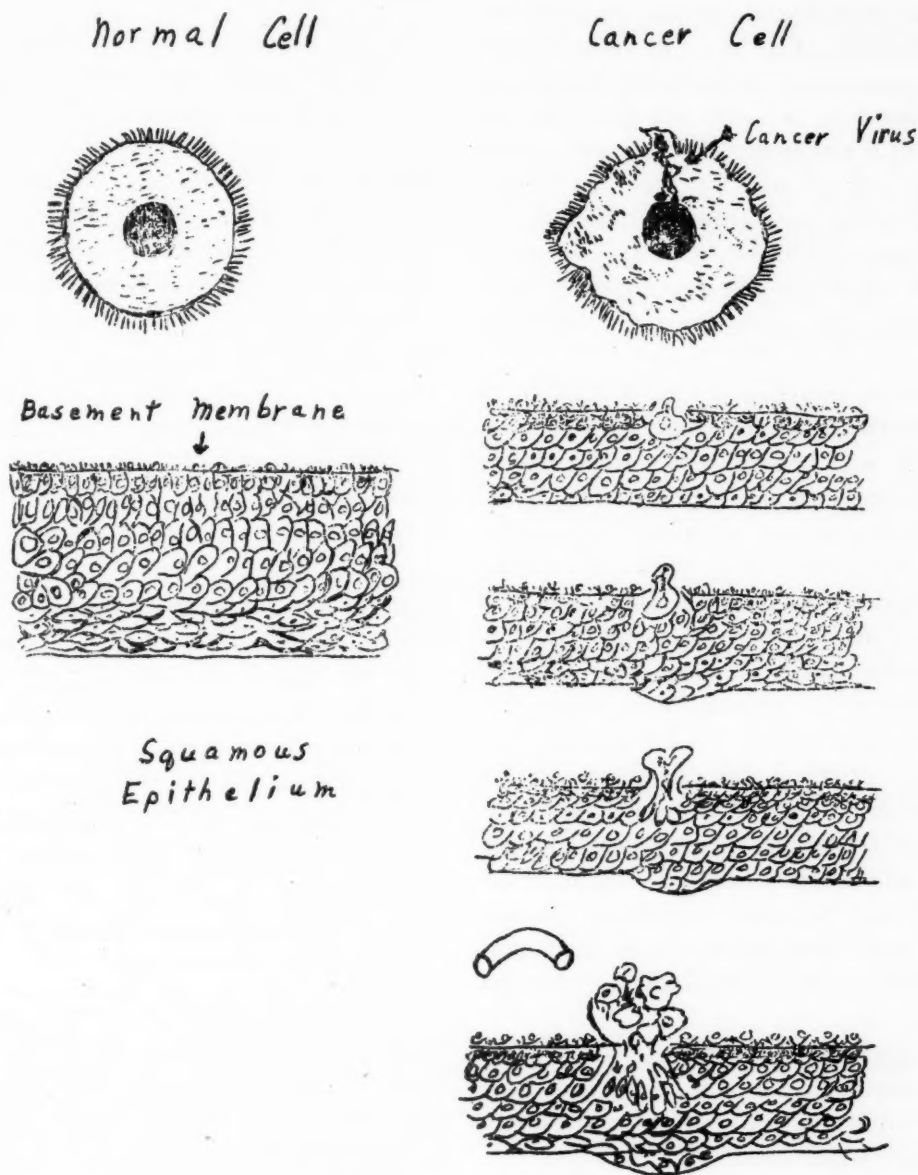


Fig. 5. Growth of normal cells and cancer cells.

the virus when viewed under the electron microscope, as a result of improper culture or age, it is clinically worthless also, but when its destructive effect on the virus is marked it is then clinically of value.

The Hodgkin's virus appears to differ slightly from the cancer virus but it seems to respond to the same treatment.

All this is still further proof that cancer is a virus disease.

the cells themselves. This suggests the presence of virus.

Clinically, we should have recognized the presence of infective organisms causing cancer, for the most prominent symptom is toxemia which is the cause of death in 80 per cent of the cases. In fact, the toxins of cancer are having their deadly effect usually even before the tumor is large enough to diagnose easily. On the other hand, cells growing wild, such as extremely large multiple

fibroids, do not produce toxic effects. This is clinical evidence that cancer is due to a virus.

Now that it has been shown that cancer is due to a virus, the nature and role of virus in cancer will be discussed.

Visualize a microscopic section of stratified squamous epithelium (Fig. 5). The cells all grow outward and away from the basement membrane, the reason being that the cells are growing, and thus more room is required. The cells are smooth on the outside except for "prickles" or bridges which allow fluid to pass between the cells and bring nourishment. During growth everything must move or "skid" in one general direction—namely, outward and away from the basement membrane.

Now, this is not so true with cancer cells, for it has been shown that they are irregular in contour. This irregularity is, I believe, produced by cancer virus within the cell, growing out against the cell wall and producing bulges. If this cell is far from the basement membrane, it continues out to the surface like any other normal cell, but if it is next to the basement membrane the bulging area may protrude into the basement membrane between the cells and break it. This ameboid, finger-like projection will then anchor itself onto the subcutaneous tissue and draw the cell inward, when it is stimulated to grow, thereby enlarging the break in the basement membrane. This, as you know, is the first sign of cancer. The cells continue to multiply under the basement membrane, invade the tissues or even the blood vessels, and thus metastasize. The accompanying drawing illustrates this (Fig. 5).

Since the cancer virus has become an integral part of the cancer cell, naturally the division cells will also be the same malignant type. Consequently all metastases will be the same cell type.

There are many factors that vary cell growth. These are irritation, chemicals, excess caloric intake, high protein diet, high unsaturated fat diet, and increased activity of certain endocrine glands.

It has been shown that the hormones not only stimulate the cells to grow but stimulate the virus to grow as well; and further, that virus, when stimulated by hormones, sensitizes the cells to grow ten times more rapidly than normal. For instance, if two groups of animals, one with the cancer virus and one without the cancer virus, are given the same amount of estrogenic hormone, those with the virus present will develop cancers of

the breast 90 per cent of the time, while the others, only benign tumors of the breast 10 per cent of the time. In other words, the cancer virus present causes those cells to be ten times more sensitive to cell stimulation and resultant growth than the normal, virus-free cells.

In the case of one patient with Grade IV cancer of the breast, treatment was given for one month with male hormone. A biopsy at that time showed a Grade III carcinoma, and one month later, Grade II carcinoma. In the Grade IV there was a large amount of virus, in the Grade III the virus was markedly diminished, and in the Grade II only a small amount of virus was present.

This shows that the hormone stimulates both the virus and the cell to grow, and shows why the Grade IV cancer is more invasive than the Grade II. In our culture work with the cancer virus the best growth was obtained when pituitary extract was added to the virus culture.

The similarity in the physiological response of this virus as compared to the response of normal cells when stimulated is not only very apparent but very essential. If only the virus grew in the cell, the cell would rupture and die, but when both the virus and the cell are stimulated to grow at the same time, the malignant invasive characteristics develop.

It is an established laboratory fact that cancer cells are more easily grown in culture than their corresponding normal cells are. Might not this be because of the increased potential for life within the cell in the form of virus?

Virus, as I have shown, is not a piece of protein broken off of something, but rather a living cell. Cancer virus has cell wall, nucleus and cytoplasm, and can be seen in cell division with a cell wall surrounding two nuclei—a typical mitosis. It can be cultured in both eggs and agar.

For those who think that virus characteristics are so much different from those of small bacteria, I would like to ask this question. How did it happen that the diminishing size of bacterial life so conveniently stopped at the upper magnifying limit of the light microscope? Naturally one will say that there is no relation between the two, and he is right. Virus are just smaller bacteria. The electron microscope is helping us to visualize how our microscopic world is enlarged. Now we can further extend our study of bacteria, for the virus is not necessarily an entirely new subject of life.

VIRUS AS A CAUSE OF HUMAN CANCER—GREGORY

Summary

Some animal cancers are proved to be due to a virus, so we know it is pathologically possible to produce cancer with virus.

The milk factor (or cancer virus) not only produces cancer of the breast in the mouse but also cancer of any tissue in the mouse, depending on the abnormal hormonal physiology or on the location of irritants.

Mouse cancer is identical to human cancer.

Virus has been found in over 1,000 human malignant tissues but not in benign tumors. This virus has been cultured and injected into animals, thereby producing various malignancies. The virus when heated to 56° Centigrade for one hour will not produce malignancy.

This virus has produced specific antibodies when injected into animals. A complement fixation test has been developed to test for the presence of this antibody in human serum. The test is 88 per cent diagnostic for cancer.

An antibiotic has been developed for the cancer virus and can be demonstrated in the electron microscope. This antibiotic has proved to be effective clinically in the treatment of some far-advanced cancers.

Clinically cancer is a toxic disease which cannot be explained merely as cells growing wild.

The role of cancer virus in the development of cancer has been demonstrated.

Since the cancer virus has become an integral part of the cancer cell, naturally all its division cells will be of the same type.

The similarity in the physiological response of this virus as compared to the response of normal cells, when stimulated, is very apparent.

The amount of virus present is in direct proportion to the grade of malignancy, which accounts for its invasive characteristics.

Cancer virus is not dead crystalline or protein material, but a living organism.

Normal cells, when stimulated to grow, cannot, from a physical standpoint, become invasive unless the cancer virus is present. Cancer virus grows inside the cell and exerts force against the cell wall, producing an irregular cell known as a digger cell. If this protrusion is next to the cementum of the basement membrane, a rupture of the basement membrane occurs and a hole is broken through to the subcutaneous tissue. Thus an invasion tumor starts.

Conclusion

Cancer virus growing within the cell is the agent which changes a normal cell into a malignant cell.

Cancer is an infectious disease in which the infective organism is the cancer virus. It sensitizes cells to grow wild and metastasize when stimulated by chemicals, irritants, toxic or excess hormones.

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Parotid Gland Tumors and Their Surgical Management

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CLARIFICATION OF the exact surgical anatomy and pathology of the parotid gland seems to have lagged behind professional knowledge of other organs accessible to surgical treatment. As a result of incorrect or misleading information, the treatment of tumors of the parotid gland has in many instances been inadequate. Neoplasms of this gland may remain completely curable for a decade or more. Yet, because of misconceptions concerning their malignant nature and proper treatment, many are allowed to pass into gross and incurable malignancy.

Interest in the surgical treatment of tumors of the parotid gland has been given a great stimulus by the pioneer work of Hamilton Bailey.¹ He has made surgeons cognizant of the deficiencies in their knowledge of the anatomic, pathologic and clinical aspects of the parotid gland.

It is our purpose here to dispel some of the common misconceptions concerning parotid tumors, to review some critical points of the surgical anatomy and pathology of the organ and to describe an adequate surgical procedure for removal of tumors of the gland.

Anatomic Considerations

The most important additions to our knowledge of the surgical anatomy of the parotid gland were observed clinically by Hamilton Bailey and demonstrated in the laboratory by McCormack, Cauldwell and Anson.¹⁰ They showed that the gland is consistently bilobular; that the superficial, spreading portion of the gland is connected to the smaller, deep portion by an isthmus. They demonstrated further that the facial nerve lies *between* the superficial and the deep portions of the gland, and that the isthmus is embraced by the temporofacial and cervicofacial divisions of the nerve. This was the source of the expression that refers to the

facial nerve as "the meat in a parotid sandwich." Another important point is the presence of frequent anastomoses between the two main divisions of the seventh nerve distal to the isthmus. The clinical importance of these observations will be noted later.

The parotid gland develops during the eighth week of fetal life from the oral ectoblast along the lateral groove separating the upper and lower jaws. Its origin differs from that of the submaxillary and sublingual glands, which develop from a ridgelike structure in the buccal epithelium occupying the furrow in the angle between the base of the tongue and the floor of the mouth.

The fully developed gland lies behind the upper part of the ramus of the mandible, which it overlaps medially and laterally. A forward prolongation over the masseter muscle superior to Stenson's duct is sometimes designated as the accessory parotid. The enveloping parotid sheath is continuous with the fascia of the neck as it passes upward from the sternomastoid muscle to the zygomatic arch. The space occupied by the parotid is bounded in front by the ramus of the mandible. The posterior margin is composed of the external auditory meatus, the tympanic plate, the base of the styloid process, and the front of the atlas. These walls meet above at the petrotympanic fissure. The posterior wall is prolonged laterally by the posterior belly of the digastric, the stylohyoid and the sternomastoid muscles. The lower part of the styloid process, the styloglossus and stylopharyngeus muscles, and the stylomandibular ligament bound the posterior portion of the gland on its medial aspect. There is no wall to the space occupied by the gland anterior to the styloid process, so the parotid rests on the fat and areolar tissue on the wall of the pharynx.

The superficial portion of the gland overlying the masseter muscle has the least limitation to growth, so it may extend upward to the zygoma, anteriorly over the edge of the masseter muscle and inferiorly until it is in contact with the submaxillary gland.

Stenson's duct emerges from the anterior aspect of the gland above its middle and courses over the masseter and through the buccinator muscles to enter the oral cavity. It lies in approximately the middle third of a line between the lower margin of the concha of the ear and the midpoint of the upper lip.

Presented at the Eighty-fifth Annual Session of the Michigan State Medical Society, September 20, 1950, at Detroit, Michigan.

Observations of Pathology

Tumors of the salivary glands constitute 1 to 2 per cent of all tumors. Tumors of the parotid gland account for about 80 per cent of salivary gland tumors.

Since Virchow described mixed tumors of the parotid in 1863, extensive study of tumors of the salivary gland has been carried out by Ewing, Boyd, McFarland, and others. In spite of the number of neoplasms examined, there is persistent disagreement concerning histogenesis, classification, and cytologic identification of individual tumors.

We prefer the following simple classification of parotid tumors:

1. *Cyst*.—Simple cyst is rare. It may develop as a result of atresia, obstruction, or congenital defects in the ducts. The unsubstantiated diagnosis of "cyst" is a dangerous one, as malignant tumors may present cystic degeneration.

2. *Adenoma*.—A tumor occurring but rarely in the parotid, the adenoma is encapsulated, grows slowly, and mimics the parent gland in microscopic appearance. The safe time to make the diagnosis of adenoma is after complete removal of the tumor.

3. *Adenocarcinoma*.—Adenocarcinoma, simple or papillary, accounts for less than 10 per cent of parotid tumors. The microscopic appearance may be well differentiated and innocent, but the ultimate fate of the patient with adenocarcinoma is sufficient evidence of the treacherous nature of this tumor. Adenocarcinomas tend to be poorly demarcated and infiltrating. The rather confusing terms "oncocyoma" and "cylindroma" designate a type of adenocarcinoma. As a rule, the growth of an adenocarcinoma is more rapid than that of the other parotid tumors; for this reason patients with adenocarcinoma usually seek treatment earlier.

4. *Mixed Tumors*.—Approximately 75 per cent of parotid tumors are so-called "mixed tumors." These are not confined to the salivary glands; they have been described as occurring also in the lacrimal glands, the nares, the tonsils and the lips. The typical site of origin in the parotid is in a comparatively circumscribed area just above and in front of the angle of the mandible. Occasionally the tumor develops just anterior to the tragus, in

which position it may be confused with an enlarged preauricular lymph node.

Mixed tumors usually appear in patients from twenty to forty years of age.⁵ They grow slowly, and may reach a diameter of 10 cm. They are usually ovoid but sometimes lobulated. Microscopically the tumors are made up of three components: complexes of epithelial cells in cords or ductlike structures, connective tissue of the mucoid type, and a substance identified as cartilage or pseudocartilage. The genealogy of these tumors is not certain.

There is a pronounced tendency toward recurrence following removal of these tumors. Marshall and Miles⁹ reported on mixed tumors of the parotid in eighty-nine patients, twenty-five of whom had undergone previous surgical treatment. Ligation of the salivary ducts in dogs is said to produce mixed tumors; this gives rise to speculation as to the effect of interference with secretion following surgical removal of part of the gland.

5. *Entodermal Cyst*.—Sometimes known as adenolymphoma or papillary cystadenoma lymphomatosum, this rare and benign tumor probably arises from the lymphoid conglomerate that surrounds the first branchial cleft. It is a bulky mass of lymphoid tissue more closely resembling that of the tonsil than that of the salivary gland. It is dangerous to diagnose this tumor unless the lesion is bilateral, particularly if the diagnosis implies a less radical treatment than that indicated for mixed parotid tumors.

6. *Tumors of Nonglandular Origin*.—A variety of rare tumors arising from blood vessels, the facial nerve, lymphoid tissue and fibrous tissue of the capsule of the gland must be remembered. It may be helpful to recall that hemangioma is the most common tumor of this region in infants. Pre-operative clinical diagnosis of this group of lesions is not usually made.

Some Common Misconceptions and Fears

We should now like to consider briefly some of the popular misconceptions and fallacies that have impeded progress in the treatment of parotid tumors.

The Fear of Facial Palsy.—This is the most common deterrent in the way of recommending or performing adequate surgical treatment of the

parotid gland. Too often there is a specter with an expressionless face, a drooping mouth and a tear-moistened cheek which appears when we speak of operating on this gland. We have found that major facial palsy occurs after division of one of the primary branches of the seventh nerve, but normal or nearly normal function returns after weeks or months. The anastomotic branches anterior to the parotid isthmus are no doubt responsible for recovery.

Facial palsy due to invasion of the seventh nerve by tumor is more frequent than that due to operation. There would seem to be no rational objection to operation on the basis of fear of injury to the seventh nerve.

A less known but equally troublesome result of nerve damage in the parotid region is the auriculotemporal (Frey's) syndrome.² When the patient with this injury eats, the cheek becomes hot, flushed and moist with perspiration. Hyperesthesia of the face is noted, especially during shaving.

The Fallacy of Waiting for the Tumor to Grow Larger.—The observation by McFarland¹¹ and by Kennon⁷ that the recurrence rate was higher after removal of small tumors may be the basis of the practice of "waiting for the lump to get bigger." There are two explanations of this seeming paradox: one is that "small" tumors are commonly removed through short incisions, which give unsatisfactory exposure and result in incomplete removal; the second reason is that it is impossible to determine when a tumor is "small." Many parotid tumors present small surface swellings that mask a much larger underlying tumor. It has also been observed that pinhead-sized additional tumors may occur in juxtaposition to the large, more easily discernible tumor.

The Ugly Scar.—As we shall point out later, an anatomically correct incision may at the same time be cosmetically acceptable. Small transverse incisions designed to parallel the branches of the facial nerve should be abandoned in favor of an incision that displays the gland in its entirety.

Fear of Salivary Fistula.—Fistula rarely or never develops after removal of large portions of the parotid gland. A persistent fistula should make one think of persistent tumor.

The Pitfall of the Preauricular Lymph Node.—Mixed parotid tumor may be misdiagnosed as an

enlarged lymph gland. The common sites of occurrence of mixed tumors should be kept in mind. If there is no obvious explanation for lymphadenopathy and the swelling continues to grow, the diagnosis of mixed tumor must always be considered.

The Pseudocyst.—The mixed tumor may be so soft and cystic as to lead the surgeon to suppose that he is removing a cyst. A cystic swelling is too often thought to be innocuous. Recall that simple cysts are rare and that the diagnosis of adenolymphoma should not be made in the presence of a unilateral lesion.

Roentgen Therapy.—Nearly all parotid tumors are definitely radioresistant. Adenolymphoma is the one possible exception that would respond to roentgen therapy. McFarland, after following patients with parotid tumors for years, found that no benefit resulted from this form of treatment. Janes,⁶ of Toronto, who studied this subject, knows of no instance in which cure has been effected by roentgen therapy. He has, however, observed deep, penetrating ulcers and intolerable pain which resulted from this treatment.

Technical Considerations

Anesthesia.—We routinely employ general inhalation anesthesia. Use of the endotracheal method permits easier access to the operative field, but the ordinary closed system with mask is satisfactory in some cases. Local anesthesia is frowned upon; inadequate anesthesia too often results in inadequate surgical handling. Further, the infiltration of tumor-bearing tissue and the obscuring of an already disturbed anatomic picture should be discouraged.

Incision.—One of two incisions may be employed. That preferred by Hamilton Bailey is a J-shaped incision from the level of the zygomatic arch, passing close to the pinna, curving around the root of the lobule of the ear to the tip of the mastoid process. If this incision does not permit visualization of the whole parotid gland, it may be extended downward on the anterior margin of the sternomastoid muscle.

The incision we prefer is one that passes from the zygomatic arch downward, very close to the pinna of the ear, and continues to just behind and below the angle of the mandible, then turns abruptly below the body of the mandible in one of the

natural skin folds of the neck. The lateral flap of this incision is then undermined from the region of the external auditory meatus. This exposes the posterior and inferior margins of the gland. In order to injure the facial nerve at this point, the operator would have to cut completely through the superficial portion of the gland. If ligation of the external carotid is to be done prior to dissection of a large tumor, it is done before flap dissection is initiated. The medial flap is then dissected free until the zygomatic arch, the body of the zygoma, the anterior edge of the masseter muscle and the mental foramen have been reached. If the tumor permits, the sheath of the parotid gland is reflected from behind forward as part of the flap. The field is now prepared for the definitive surgical procedure.

At this point it is well to insert a warning against an attempt to enucleate the tumor. In nearly all parotid tumors enucleation is an illusion. Small satellite tumors or tentacle-like extensions of the parent tumor, neither grossly discernible, may be left behind in spite of the appearance of clean enucleation. Attempts to shell out apparently discrete lesions no doubt account for most of the high recurrence rate (30 per cent or more) of mixed parotid tumors. Local excision of a parotid tumor would seem to be as irrational as local excision of a malignant tumor of the stomach or rectum.

The origin of most parotid tumors in the superficial lobe of the gland is a factor in favor of the surgeon. *Superficial lobectomy* (a term suggested by Bailey) will provide adequate tissue excision in most cases.

If lobectomy or total parotidectomy is elected, preliminary ligation of the external carotid artery will obviate much troublesome bleeding. The longest portion of the external carotid without branches, and therefore the easiest to ligate, is that between the superior thyroid and lingual arteries.

The superior margin of the gland should be cleared first, followed by cleaning of the anterior-superior aspect of the superficial lobe. The buccinator branch of the facial nerve will be identified superficial to Stenson's duct. This branch may be used as a key to the depth of the proximal divisions of the nerve. Stenson's duct is left intact, and removal of the superficial lobe of the gland is carried out from before backward until the isthmus is reached. If it is necessary to divide Stenson's duct, it is excised at this point. The isthmus may

now be divided, care being exercised to avoid the major divisions of the facial nerve. Bleeding may be encountered from the external carotid artery or its branches and the posterior facial vein, which lie posterior to the isthmus, usually deep to the seventh nerve. The auriculotemporal nerve may be severed at this same point, posterior to the isthmus, where its course nearly parallels that of the vessels. This maneuver completes the superficial lobectomy.

If it is necessary to excise the deep lobe of the gland for a large tumor wedged in the space between the ramus of the mandible and the mastoid process, it is best to carry out the dissection outlined above as a preliminary step. If there is a question of damaging the main trunk of the seventh nerve, it may be well to resect the tip of the mastoid process, as suggested by Janes, in order to expose the stylomastoid foramen and trunk of the nerve. The posterior and lateral surfaces of the deep lobe are then freed so as to mobilize the lobe prior to the more hazardous dissection of its medial and anterior surfaces.

Injury to the Facial Nerve

Permanent and significant facial palsy will result only if the *main trunk* of the seventh nerve is divided proximal to the parotid isthmus. Recovery of function is the rule after damage to branches of the nerve anterior to the parotid isthmus.

Transitory paresis due to division of lesser branches of the seventh nerve may be corrected by the use of supporting adhesive strips. If drooping of the mouth persists, Dahlberg's internal splint (a dental prosthesis) may be employed.⁴

Division of the main trunk of the nerve is best avoided by initial excision of the superficial lobe and by resection of the mastoid process if the course of the nerve is still obscure. In cases of permanent palsy, one of the plastic procedures, such as the Lodge fascial transplant,⁸ J. B. Brown's technique of subcutaneous fascial strips attached to the temporal muscle,³ or the employment of braided tantalum sutures¹² in similar fashion, is recommended.

Summary

1. Attention is called to certain deficiencies in present knowledge related to the surgical anatomy and pathology of the parotid gland. Critical points of anatomy are reviewed, with special emphasis on the relations of the facial nerve.

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Physical Examinations in Industry as Cancer Case Finding Procedures

By C. D. Selby, M.D.
Ann Arbor, Michigan

PHYSICAL EXAMINATIONS in industry are usually for special purposes, such as: (1) selection and placement of people at time of employment and after absences from work for various reasons, (2) early diagnosis of occupational diseases with special attention to symptoms and findings of diseases resulting from the predominant occupational exposures found in the plant concerned, (3) estimations of disability in claims for compensation, (4) health maintenance, and (5) case-finding surveys, or special disease-control programs.

For each of these purposes an individualized routine is followed and rarely does it cover all parts and functions of the body. In employment and placement of new and returned employees, the examination is one that will permit recognition and estimation of handicaps and capacities as well as knowledge and skills. Examinations after absence from work may be limited so as to consist of questions mostly, with perhaps a casual inspection, depending on the length of time absent and reasons for absence. The extent is left to the judgment of the physician.

In the early diagnosis of occupational diseases the examination is one that will indicate presence or absence or improvement of occupational diseases. It, too, may be very limited, seeking only evidence of an occupational disease or two, known to be possible through employment exposures. In some instances it may be restricted to laboratory tests only. For disability estimations, the examination may concern only the part or parts affected.

For health maintenance, the examination may be very complete or partial depending upon the judgement of the physician making the examination. Usually, it is made periodically, sometimes annually, but more frequently every other year and sometimes not quite that often.

The extent to which a physician carries on such

an examination will be suggested to him by the presence of symptoms or an employee's record of complaints. Health examinations, as they are called, are designed to assist employees in keeping well and employable, and to obtain early treatment from their family doctors if that is needed.

Case-finding examinations are also very limited procedures and sometimes consist only of laboratory work, as for example, in diseases of the chest and particularly the lungs and heart, diabetes, and cancer. Examinations of this nature are usually conducted in mass by agencies outside of industry. Within the last two or three years, however, some industrial physicians have made special efforts in connection with diseases of the heart, cancer of the lung, and other diseases which are non-occupational in nature but nevertheless, productive of disabilities which severely impair working capacities.

In view of the foregoing, it is evident that physical examinations in industry as ordinarily practiced do not offer unusual opportunities for cancer detection. The skin and other superficial malignancies may be spotted, of course, in one fashion or another, and when they are, the patients guided into proper channels for early care. Cancers of occupational origin are carefully sought after and found early. Their principal sources are paraffin, oil, pitch, and tar exposures. There are other cancer-causing industrial materials but they need not be specified at this time.

Generally speaking, industrial physical examinations cannot give sufficient attention to the areas most frequently involved in cancer, such as the stomach and prostate in men, and breast and cervix in women. The industrial examination, however, is contributing increasingly to the early recognition of lung cancer through use of chest x-rays as a routine feature of the examination.

Despite the limitations of examinations in industry, there are two ways through which early cancer detection can be promoted in industrial medical departments: (1) through the fine relationship which exists between the industrial physicians and employees served by them, and (2) the adaptation of certain features of the Hillsdale Plan to industrial medical procedures. Referring to the employee-physician relations, the opportunities by industrial physicians to counsel with employees are enjoyed to a like extent by few physicians outside of industrial practice. It is not unusual, for example, for employees to make one or two visits to

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the medical department each month. In a plant employing 10,000 people this custom would therefore provide the plant physician and his staff with 10,000 to 20,000 employee contacts each month, each one of which is a personal and sometimes of a very intimate nature. Through the record which is kept of services of this kind, it becomes quickly evident that certain employees are suffering from conditions which require close study and perhaps active treatment by their family doctors. For example, one man comes in with symptoms of indigestion. He asks for soda bicarbonate. When this has happened a certain number of times, the nurse or doctor who has seen him decides that a study of the case is in order. It is studied, x-rays are taken, and malignancy of the colon is found. An operation was obtained early enough so prospects for a cure are reasonably good. Such was actually the case, yet various examinations received by the patient failed to indicate what was occurring while the record led to a study which did. This case illustrates what is happening in industrial medical departments and how routine services lead eventually to the discovery of malignancies earlier than had they come to their own doctors later on. It must be admitted that procedures of this kind do not rate as early detection procedures.

It may be that industry's contribution brought about in this fashion is sufficient, but the success of the Hillsdale program for tumor detection suggests that even greater successes can be obtained in industry if the plan can be integrated with routine industrial medical services. Of course that would mean that every industrial medical department is potentially a cancer detection center. There are, however, certain cases, especially in the women, where the plant physician cannot go so far. There would be too much criticism if, for instance, every woman in the plant had a vaginal examination or an examination of the breast. Industrial physicians simply cannot do that sort of thing, but they can follow up leads brought about by studies of the records and requests for service or advice from the employee. If they are not in a position to make the examinations themselves, they can send the employees to their own doctors as provided in the Hillsdale Plan. In that way industrial medicine becomes a feeder for doctors who are participating in cancer detection. Incidentally, this same routine results in fairly early discovery of other chronic diseases such as diabetes and heart disease.

There is a third way in which industrial medical departments can be helpful in the promotion of cancer control and that is through education. Dr. Joseph S. Devitt of Milwaukee, for example, has discussed cancer in an employee's magazine, and I believe that his contribution is sufficiently important to justify a complete quotation.

"In this year alone 200,000 persons are, with cold, statistical certainty, going to die of one single disease—cancer.

"Not a very pleasant thing to think about, is it? Can't something be done to cut down this death toll?

"My answer is Yes, something can be done—maybe. And the maybe depends in a large part on each one of us that may become a victim of cancer.

"At least half the folks who will die of cancer this year failed to help themselves in one of these ways: (1) they failed to pay attention to their symptoms of cancer; (2) they failed to have the courage to tell their physician of the symptoms, or (3) they failed to learn the symptoms of cancer.

"But, you may say, We're not doctors. How can we recognize the symptoms of cancer?

"Here's how—by simply remembering that any of the following developments may mean cancer:

- "1. A lump anywhere in the body, especially if it is growing.
- "2. A sore which does not heal.
- "3. Continued indigestion or loss of appetite.
- "4. A change in bowel habits.
- "5. Bleeding from any body opening, such as the rectum, et cetera.
- "6. Chronic cough, hoarseness.
- "7. Difficulty in swallowing.

"If you will look back at the paragraph coming just before this list of seven cancer symptoms, you'll see that I said these symptoms may mean cancer. Other diseases besides cancer may cause any of these symptoms—and this is important to remember because it is the job of the doctor, once he knows about the symptoms, to search carefully and thoroughly and find out what diseases are causing them.

"You've got to co-operate with him in this job. Tell him about your complaints within a week or two after they begin. This may mean the difference between life and death for you.

"Far too many folks still labor under two very mistaken ideas about cancer. Their first mistaken idea is that a diagnosis of cancer amounts to a death warrant. Their second mistaken idea about cancer is that it sneaks up on a victim and develops to the stage where it can't be cured before it produces symptoms of its presence.

"Let's debunk these two phony impressions right now. Many cancers are being cured everyday by operation, x-ray, or radium—but not by anything else. Keep away from the salves, colored lights or grandma's vinegar and milk poultices—they won't help you a bit. Let your com-

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Cancer Control in Michigan

By Albert E. Heustis, M.D.
Lansing, Michigan

THIS DISCUSSION of cancer control in Michigan will be considered under three main headings: First, the problem; second, the history and present activities; and finally, the needs as I see them.

Fifteen per cent of all who die in Michigan, die of cancer. In our state, cancer is the second most common way to die. Last year in Michigan there were 8,697 deaths due to cancer. That's about one every hour. Twenty-five per cent of those dying of cancer last year had their disease in an accessible site. That is, the cancer was in a site which could be seen by the eye or felt by the finger.

Although some progress in the reporting of persons who are alive with cancer was made last year, we still have very very little knowledge about cases. We still know only about deaths. As yet we do not have enough data to tell at what age cancer occurs and what happens after that.

To increase our problems in dealing with cancer, we find that it is a disease in which as yet there is no single simple screening test to help us find it. In order to diagnose most cancer we need a careful history, a painstaking physical examination with all clothing removed and including an examination of all body openings. We often need detailed x-ray studies, and somewhere along the line there is usually an examination of the suspected tissue under the microscope. All of this takes professional time—the doctor's time.

Organized cancer-control activities began in Michigan about 1900 when the reporting of cancer as a cause of death was inaugurated. We have come a long way since that time. At the turn of the century diagnosis was mostly on the basis of subjective evaluation, while now we are relying more and more upon pathological study. Over the years there has been not only an increase in the accuracy of statistics, but we have developed better technical knowledge and skills on how to diagnose and how to treat cancer.

Presented at the Second Michigan Cancer Conference, Grand Rapids, October 18, 1950.

Dr. Heustis is Commissioner, Michigan Department of Health.

Throughout the years Michigan has led the way in cancer-control activities. This has been due in no small measure to the courage, the hard work, and the leadership of Dr. Norman Miller, who for many years has served as the chairman of the Michigan Cancer Control Committee. As doctors, our job is to save lives and reduce suffering, but Doctor Miller's contribution has been far above and beyond the call of duty—as a doctor, as a teacher, and as a friend. It seems to me that this conference should pause and reflect upon the contributions which Doctor Miller has made, and on behalf of this conference, as your State Health Commissioner, and as your student, I would like to say,

"Doctor Miller, we know and we will remember."

In addition to providing leadership, Michigan has led the way because of the initiative and the action of her private physicians, because of the action of the voluntary Michigan Branch of the American Cancer Society, and because of the work of official public health departments.

Organized cancer control started here in Michigan by having the usual activities in hospitals and in doctors' offices supplemented by cancer-detection centers or clinics, and we now have some fifteen such centers in operation. More recently we have seen the birth and the growth of the Family Physician's Plan or the Hillsdale Plan, and now some twenty to twenty-five Michigan counties are on record as accepting in principle this plan. It has also succeeded in gaining considerable national recognition.

Throughout it all, Michigan as a state has had a cancer-control committee in which, at the state level, opportunity has been given for those most active in cancer control to work together. This includes the Michigan State Medical Society, the Michigan Branch of the American Cancer Society, and the Michigan Department of Health.

During the past year, efforts have been directed at several things which I believe should be called to your attention. In lay education, there has been distribution of films and literature. There have been exhibits at fairs and other places; there have been radio programs, and there is the experimental use of the *High School Manual* in three counties.

Contributions in professional education have included the stimulation of general interest in cancer among local groups of doctors, postgraduate

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courses, cancer days, articles in professional journals, and the distribution of the *Cancer Bulletin*.

In the northern peninsula, activity is under way, pointing up the joint financing of a laboratory to do Papanicolaou examinations.

In our whole state we have more and better facilities for diagnosis and treatment, and also there is provision for financial assistance where necessary for diagnostic examinations.

Work has been done to get all concerned to recognize and accept the challenge of the problem of cancer in their own communities.

These are quite imposing accomplishments, especially if we take into consideration the time and effort, and yes, even the money available for the work. It represents positive accomplishment.

There are some things on the debit side of the ledger too.

Cancer-control activities in Michigan have been hindered, made more difficult, or delayed by the striving for favored position of some persons or groups—a striving for power or control. This has not been on the surface always. It has concerned itself with many things, including who is to be the "king pin" in the show; who is going to get the credit; where is the case file going to be set up; how can the local health department be kept out or gotten in; who is to be in on the planning?

Cancer control is so big that there is room for everyone. There is not only room for everyone but everyone is vitally needed. The stakes are so high that there must be full co-operation—united planning. There is no place for behind-the-scenes maneuvering to see if credit or discredit can be brought upon any element of the program. There is a need for a positive enlightened program with all concerned in on the planning of the program, as well as in on its execution.

Cancer-control activities have been hindered, too, by the lack of an effective case-reporting mechanism. In my opinion, the reporting of cancer is not only legal but it is the most effective way to devise the best method of combating the disease. Rules and regulations concerning the reporting of cancer have been promulgated by the State Health Commissioner, approved as to form and legality by the Attorney General, and duly published in the Administrative Code. This has been done to protect those who would report voluntarily, and the action has been approved by the Michigan Cancer Control Committee.

The Michigan Department of Health is firmly

on record in favor of cancer reporting. Where do the others in cancer control stand? If they are in favor of reporting, and some question its legality, those groups have a responsibility to see that it is brought about even to the extent of promoting any needed legislation. Do we really want to find out about cancer, or do we just want to talk about it?

No reporting mechanism for cancer will ever be effective until both the people who make out the reports and those who receive them are convinced of the need and the value of the procedure. Reporting of cancer cases should be talked about, and if the Michigan Department of Health and the Michigan Cancer Control Committee are wrong, then we should forget it. Here is an opportunity for a real contribution to cancer control.

Professor Bagwell gives a stirring talk on "Hats Off to the Past; Coats Off to the Future." This applies to cancer control just as much as to other activities.

The big need for the future, as I see it, is the acceptance by private physicians, lay groups, and local public health departments that a cancer-control program can serve its purpose and not only reduce suffering and death from cancer itself, but can do the same for a host of other diseases as well.

Another need is to develop better and more accurate ways of evaluating our educational program.

Finally, we need better local organization and co-ordination—planning, if you will. I am thinking of local conferences such as this. The start has been made in some places, you know. I am thinking of more local participation, more discussion of what people think their needs are—yes, even perhaps at state meetings such as this. A successful cancer program must include all groups with an interest in cancer. Local organization will result, not in a variety of local plans, but in everyone working together for local cancer control. Good local cancer control means good state cancer control.

Any program of cancer control, to be effective, must be a local program. Any successful program brings all interested persons actively into the planning phase, and there intimately concerned folks sit down and together plan a co-ordinated program.

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The Register in the Michigan Cancer Program

By C. J. Poppen, M.D.
Lansing, Michigan

NO COMMUNITY program can effectively control cancer without a knowledge of the number, location and characteristics of cases. Its principal objective is to obtain information concerning living cases at the earliest possible stage in the development of the disease.

There are two primary specific purposes for the Cancer Register; namely, (1) to facilitate service, and (2) to facilitate program planning and evaluation. The register serves as a foundation for the control program by functioning as a clearing house through which services offered by various health agencies are made available to the patient and his physician as needed. The use of records facilitates services by identifying the individual being served; indicating the nature and status of the case; providing a record of the services needed and given; scheduling activity; measuring effectiveness with which service is provided; assuring follow-up directed towards continuity of care, and making statistics available for planning and evaluating the service program.

The Register provides the basis for cancer program planning and evaluation. It provides the necessary data for measuring the nature and magnitude of the cancer problem for comparison with other communities and for evaluating the effectiveness of control measures. Data abstracted from all reported cases provides needed morbidity information including incidence, prevalence, the demographic and geographic distribution of persons with cancer, and the primary site and stage at diagnosis. The register may be used for determining the community requirements for different types of medical facilities such as diagnostic and treatment facilities, hospital beds, and nursing and terminal care homes.

The Cancer Register provides material for use in professional and lay education programs. Professional interest is aroused and maintained by information pertaining to primary site, method of diagnosis, therapy and the end results. The mor-

bidity reporting system provides quantitative measures by examining trends in stage of diagnosis, utilization of accepted diagnostic techniques with respect to method of diagnosis; success of case holding by determining proportion of cases returning for re-examination or treatment at regular intervals; and the efficacy of various therapeutic techniques by analyzing survival and cure. Public awareness can best be aroused by indicating the size of the cancer problem, the importance of early and accurate diagnosis, and the need for adequate and continuous medical care. The significance of studies of time lags from the onset of symptoms until diagnosis and treatment should have special educational value to both the profession and the public.

The Cancer Register should be established and maintained in each local community at the operating level of the program. To achieve completeness, the reporting system should cover every physician, hospital, clinic and medical facility.

In accordance with the provisions of Act 146, P.A. 1919, cancer was declared reportable in April 24, 1947, by the Commissioner of Health and was adopted by the State Health Council after review by the Attorney General.

The regulation is published as follows:

CANCER DECLARED REPORTABLE

(Adopted by State Council of Health, April 24, 1947)

On and after May 1, 1947, every physician, dentist, hospital superintendent and clinic director who has knowledge of a case of cancer shall, within ten days, report the same to the Michigan Department of Health on a form provided by said department. The report shall contain the name and address of the patient and either the name and address of the physician, or dentist, or of the hospital superintendent and hospital, or of the clinic director and clinic and such other data as may be required.

All such reports and records of the Michigan Department of Health pertaining to cancer are hereby declared to be confidential.

Summary

1. A Cancer Register furnishes the information on which effective programs can be based and maintained.
2. Statistical data measure the magnitude of the cancer problem.
3. Routine reporting of all cancer cases can be justified only if service is to be given.
4. Ancillary services offered by various health

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Dr. Poppen is Chief of the Section of Cancer and Adult Health Service, Michigan State Department of Health.

The Hillsdale Plan for Tumor Detection

A Three-Year Survey

By Arthur W. Strom, M.D.

Hillsdale, Michigan

THE PROGRAM for tumor detection which was begun by members of the Hillsdale County Medical Society has now completed three years of successful operation. Previous reports covering the first year¹ and the first nineteen months² of work done have been published. This summary may serve a useful purpose for other county societies which are contemplating tumor detection programs.

During this three-year period 3,563 tumor detection examinations have been made on 2,430 individuals—426 males and 2,004 females. Although all patients examined have been urged to be re-examined every six months, only twenty have had six examinations; fifty-eight, five examinations, and ninety-three, four examinations. Through this program eighty-nine cancers have been diagnosed. Examinations have averaged about 100 each month and show no trend to change in number. We have continued to find that two-thirds of the cancers found through this program were in early or moderately advanced stages, whereas only one-third of the cancers found during hospital or home examinations were in early or moderately advanced stages.

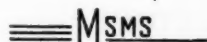
We have found that the plan is an excellent educational program for the laity and satisfies their need and demand for cancer-detection examinations. It has stimulated an awareness of the value of early cancer diagnosis on the part of our members to not only search for cancer in readily accessible locations, but to refer patients for roentgenological and laboratory examinations so necessary in the diagnosis of more obscure cancers. Our records indicate that the goal of early diagnosis of cancer in its curable stages is being approached more nearly than three years ago. The tendency on the part of those examined to consider one examination with negative findings as assurance against cancer for an indefinite period is on the wane. The desirable relationship of a patient with his own interested physician has been preserved

in making every physician's office a tumor-detection center.

The Hillsdale County Medical Society has decided to continue its present record system of reporting negative findings as well as proven cases of cancer for an additional two-year period so that an evaluation of the volume of work done can be made. At the end of a five-year period another summary will be published. It is our intention to continue this plan of tumor detection as a permanent project in our community.

References

1. MSMS Cancer Control Committee: The Hillsdale Plan for tumor detection. *J. Michigan M. Soc.*, 48:445, (April) 1949.
2. Strom, Arthur W.: The Hillsdale Plan in action. *J. Michigan M. Soc.*, 49:302, (March) 1950.



CANCER CONTROL IN MICHIGAN

(Continued from Page 405)

There is no reason why a community, if it so desires, cannot have a program that involves more than one method. There is no reason why the Family Physician's Plan or the Hillsdale Plan cannot work, and work very well, in a community that already has a cancer detection center.

Those interested in cancer should discuss and decide the need for reporting. If they decide that reporting is necessary, it is then their responsibility to do whatever is in order to bring about an effective system. I am not referring to committee action, but rather to forthright stands by whole organizations.

Cancer control is not a job for the cancer society alone; it is not a job for the private physicians alone or health departments alone. Without the active interest and mutual support and confidence of these and others interested in cancer, the people of Michigan will suffer. The cancer program is too big, much too big, for that to happen. Remember, in Michigan, one person died from cancer almost every hour last year. In cancer control we are not concerned with principles alone, we are concerned with human lives.

Whether Michigan people will live or die depend upon how well those interested in cancer control can and will work together.

Editorial

ANOTHER MICHIGAN FIRST

THE MARCH issue of THE JOURNAL of the Michigan State Medical Society was devoted exclusively to Atomic Energy and Civilian Defense. When the planning was in process it was anticipated that we might have a few short papers, which could be included in the Cancer number of THE JOURNAL. However, as material increased, it became necessary to delay the cancer papers which were to appear, and they are presented in this, the April number. The publishing of a complete Journal devoted to atomic material makes another Michigan First (the 27th).

CANCER EDUCATION

NO SCIENTIST yet has found the answer to two very important questions: (1) what causes a group of body cells to grow wildly in the first place, and (2) what is the agent that causes the reproduction of cells in normal healing to cease when restoration is complete but disappears completely when cancer growth begins?

Until someone finds the answer to these two questions, there must be an increasing educational program, both lay and professional, to try to keep the 1950 cancer death rate of more than 8,000 citizens of Michigan from reaching a five-figure mark by 1952.

The Cancer Control Committee of the MSMS has instituted pilot studies in the teaching of a non-frightening awareness of the basic principles of cancer to high school students in Genesee, Muskegon and Emmet Counties.

The reason: We would venture to guess that not more than one out of ten Michigan adults could name two of the seven early signs of cancer or be able to state positively that pain as a rule is a very late, and not an early, symptom of cancer.

This, in spite of the fact that the seven early signs have been printed countless times in newspapers and popular national magazines and in the millions of brochures that have been distributed through local branches of the American Cancer Society. These signs have been enumerated repeatedly in speeches before luncheon clubs, women's clubs and mixed adult audiences.

High school students are the cancer patients of tomorrow. An effort is being made to stress the fact that the only thing about cancer to be ashamed of is not that one has it but that patients do not present themselves early enough to be cured. We think that these youngsters are at a teachable age where ideas properly implanted will be retained for a lifetime.

Education of the medical profession must parallel this lay program so that those laymen who do appear with suspicious symptoms may have the benefit of a careful and proper examination and then be advised to have the best-known treatment or combinations of treatment of the moment.

Our two medical schools are stressing the routine examination for cancer to all senior students. Postgraduate courses in cancer detection are available and cancer topics appear on every postgraduate program.

Cancer is not seasonal. It is no respecter of social position, financial standing, age, sex, color or creed. Cancer cells belong to no union with regard to working hours and the "take home pay" in neglected cases is inevitably death.

Even though we develop billion-volt machines or ultra-selective isotopes, change plantinum encased radium needles to radiocative cobalt needles, or revert to the radical Wertheim or mass gland dissection—surgical procedures alone or in various combinations—nothing can be accomplished until we have patients presenting themselves for treatment in a curable stage of the disease.

True, some obscure brain and liver lesions and the lymphoblastoma group do not lend themselves to either surgery or radiation and are slow to manifest their presence clinically.

Still, the medical profession must be alert to detect those that do respond to present-day methods and not pooh-pooh the fears of a matron who thinks she may have one of the seven signs of early cancer. Wishful thinking on the part of the doctor so consulted, who does not want his former kindergarten playmate to have cancer in the first place, may be the basis for patting her on the back and telling her to go home—unexamined!—and quit worrying. He has done irreparable

(Continued on Page 410)

Outmoded?

If we recognize confusion, ignorance, dereliction, insincerity and ideologies of tyranny in high government levels, it is our business to do something corrective. For this specific purpose our CAP (Co-operation with the American Public) answers the requirements. So far we have utilized it for but a small part of its inherent value. We believe there are many problems with which CAP should concern itself.

We believe our schools should have political science departments that would train aspirants to public office on the highest professional plane. Those, who choose a political career should be thoroughly indoctrinated with the ideologies of Americanism. He or she should be aware of how government was established to maintain the individual's rights. There is nothing new or outmoded about Democracy.

People, especially those of other countries, want to believe in what we stand for. The trouble is there is a wide gap between our ideals and our realities. If we can be instrumental in eventually removing some of the prejudice, religious and racial intolerance, bigotry and bias, over the next five years, we may still have a land where the individual's rights are supreme.

At the present time, Russia and her satellites number almost 800 million. The free nations account for about 750 million people. The remaining 700 million people of Asia will not always remain neutral. At present, they do not join freedom's ranks because they are confused. The confusion arises right here in America. We teach one thing but are headed rapidly for a socialistic totalitarian state. If we can live the principles of freedom in such a manner as to make them acceptable, then we can carry the balance of power and eradicate tyranny without armed strife.

The United Nations has been able to prevent armed conflict on eighteen occasions. Under the direction of many subdivisions, much has been done for the poorer underprivileged peoples of the world. Extraordinary progress has evolved to promote better health. In spite of unfortunate adverse publicity, much good has been accomplished. Here, again, we must promote individuals who have the ultimate in training and integrity.

When we of the Michigan State Medical Society review this entire problem of public relations, we are likely to become discouraged. At such times I like to remember the story of the lecturer in an outdoor stadium who asked everyone in his audience to light a match when he counted three. No one who attended will ever forget the brilliance of the combined effort.

Democracy will be outmoded only if you and I permit it.

C. C. Humphrey M.D.

President, Michigan State Medical Society

President's



Message

CANCER EDUCATION

(Continued from Page 408)

damage to the lay education program and he may have caused her to lose the only chance for cure she had.

The answer to the two questions may be found tomorrow. It may be years. In the meantime we as physicians must keep learning and not the least lesson is to really do a physical examination on those who ask for it. In short, let "auld acquaintance be forgot."

HORACE WRAY PORTER.

THE DOCTOR'S INCOME

THE present necessity of reporting income, paying the tax, and predicting the future, incidentally making the preliminary advance payment, reminds us of a program we proposed several times in the past.*

The American Bar Association, in 1948, proposed two actions Congress could take to equalize the professional man with the executive in industry:

1. Adopt an amendment to the existing pension trust provisions permitting partners and individual proprietors to formulate pension plans, the costs of which are deductible in computing income tax, but to be subject to taxation when the trust is effective. This action would remove the discrimination against professional people.

2. Adopt a personal and individual retirement plan, whereby a person with earned income would be permitted to set aside a fixed proportion of his income each year for the benefit of his old age. Exemption from immediate income tax would be allowed if the funds were invested in specified non-negotiable government bonds. In later life, as these bonds mature, they would be subject to income tax in the year cashed.

Doctors, lawyers, dentists, and architects, who have a limited period of adequate income, should profit from the action of labor. The average union man never talks of his income—he talks only of "Take Home Pay." We could well do the same, and demand that we be allowed to so arrange our income that we will provide for our future. Labor does—we can.

Most persons employed by companies are covered by pension or profit-sharing plans which

*Journal MSMS, Sept., 1945, p. 1013; Sept., 1949, pp. 1171-2; July, 1950, p. 810.

escape taxation as "operating expenses." These extra savings are taxed as they are received.

Self-employed professional men cannot now use this plan. Concerted and determined agitation, however, can bring a deserved readjustment.

E M I C

DO YOU remember the Emergency Maternal and Infant Care Program which the government enforced during the last war, whereby bureaucracies from Washington directed the care of wives and infants of those in military service?

The government paid the bill, inadequately, and controlled the service with restrictions and regulations "super-adequately." Do we want that again? It is being advocated in Washington, and by labor leaders, some in Michigan.

The medical profession is attempting to have a voice in the considerations, in the conferences, and in the establishment of a program, before too late. The proposal is to make it an emergency program now. Years passed before we could disentangle ourselves from this federal control imposed during World War II. If it should be re-established during this present so-called emergency, will it ever be discontinued?

During World War II, the E M I C program was proposed and enforced as a patriotic measure. No Doctor of Medicine objects to patriotic duties and he recognizes responsibilities to the children and wives of our fighting men, but we contend a more just scheme could be evolved and we thoroughly mistrust the bureaucrats who were in the driver's seat during the not yet finished World War II.

Five more years to statism! or just nothing if we have had an all-out atomic war. Those who would combat socialism must make up their minds to work awfully hard, and soon.

ON THE RUN . . .

Spider naevi are significant when multiple and widespread. They may occur normally in adolescent girls and pregnant women.

Large doses of penicillin are more effective than smaller doses because of the longer time during which they provide effective concentration.

After ten years have elapsed, patients with cholecystectomy have a mortality rate within the normal range.

Tonsillectomy has become increasingly elective with the introduction of the antibiotics.

—Selected by W. S. REVENO, M.D.

TV and Medicine

"All the world's a stage and all the men and women merely players . . ." Shakespeare said a lensfull, and that was before television. The broadcasting camera pours into millions of homes each day the truths and inanities of life because it photocasts *people*, all kinds of people. Lately the lens has encompassed the doings of the medical profession.

To good advantage the color TV camera has brought before Michigan M.D.'s the surgical procedures of master hands. Smith, Kline and French Laboratories sponsored direct telecasts to doctors of Detroit of surgical studies carried out under the aegis of Wayne University surgery professors. The American and International Colleges of Surgeons placed the techniques of their master surgeons before their colleagues, and the American Medical Association acclaimed this new teaching device in similar fashion. These telecasts were on closed circuits. All the public knew about them, they read in the newspapers. Maybe that was as it should be because many people can't stomach the sight of blood and would turn faint at viewing the manipulations of the scalpel, suture and hemostat.

But the people are curious about what the medical profession does and so it is only natural that the television camera should poke its lens into the doctor's office, and the hospital. Actually television had no choice in doing this because it will live or die by answering or failing to answer what the public asks to see on its video screen.

MSMS TV

When the Michigan State Medical Society was approached last September by television's representatives, there could be, in all common sense, no alternative to co-operating in placing before the people today's doctor of medicine. It was done. Each Sunday at 12:00 noon the electric cameras at WJBK-TV (Channel 2) grind for one-half hour to send into 400,000 homes in southeastern Michigan the "It's Your Life" Show, presented by the MSMS and sponsored by the Medical Arts Pharmacy of Detroit.

It's estimated that more than a million people listen, watch and sit in judgment as emcee Jack Pickering, science reporter of the *Detroit Times*,

probes the experts with pertinent questions. The experts, of course, are doctors of medicine, chosen because of their knowledge in those separate fields of medicine that are most interesting to the general population.

The questions are prepared at the request of the doctor and are also obtained from letters submitted by the television audience. Supplementing the personal appearance on the program is a ten to fifteen minute motion picture depicting the principle thought of the program in dramatic fashion.

"It's Your Life" is a popular program. Tried out by Mr. Howard Mordue, president of Medical Arts Pharmacy, on a thirteen-week basis, the series has been renewed on a fifty-two-week contract.

Television Is Significant

There is little question that television will soon become—if it is not already—the greatest medium of mass education ever devised.

However, the significance of MSMS participation in television is not limited to mere participation in another communication medium. If such were the case, "It's Your Life" would be but one factor in the present well-rounded program which already embraces radio, newspaper, magazines, motion pictures, pamphlets, public speaking, et cetera. Instead it can be said that "It's Your Life" is the beginning of the active functioning of a year-round good citizenship campaign. It is directed toward placing the medical profession in the forefront of a statewide effort to take to the people the problems confronting them in respect to their social, physical and mental health and show *what* is being done about those problems, *who* is doing it, and *how* it is being done.

The medical profession has long recognized that *personal responsibility* of the *individual* is the cornerstone of good health. Today, as never before, it is apparent that "personal responsibility of the individual" is the cornerstone of good government. Consequently, "It's Your Life" is not limited to a discussion of the scientific in medicine but in each instance also presents the organizational effort being made, and the place in the effort of any individual interested.

Impressions Count

Probably of most importance in the television program, as it is in the entire public relations effort of the MSMS, are the "impressions" gained by those who are exposed to the program. These "impressions" prevail over all reason and all fact, yet they are often nebulous and, more often than not, unspoken. Only the most cunning surveys can measure them, and no scale yet has been devised to count them. In consequence, although public relations activity is designed to promulgate and produce certain impressions, it can only be measured, and that somewhat roughly, by measuring action resulting from impressions gained.

For example: The public has gained the impression that doctors of medicine are reliable authorities in the field of health. The public also has gained the impression that doctors of medicine are opposed to socialized medicine. As a result the public gains the impression that socialized medicine is something which is undesirable from the standpoint of their personal health.

Other impressions bear upon this basic impression, which is the reason why proponents of socialized medicine have attempted to discredit the medical profession by creating false impressions as to the reasons why the doctor is opposed, the authenticity of the doctors' opposition, the credibility of the doctors' knowledge in matters economic and social, the greater value of a totalitarian system as contrasted with our present system of medical care.

So far these and other false impressions have not been gained or accepted by a majority of the people or we would long since have taken more steps toward a complete socialistic state. The reason why such false impressions have not gained acceptance has been due to both a constant campaign to build confidence in the medical profession and to the continued confidence of the people in their individual family doctor.

This confidence has to be not only the assurance that the individual doctor and the medical profession generally has the *scientific ability* to cure or contain illness but also that the individual doctor and the medical profession has the means for *delivering* the care when it is needed. The medical profession generally has delivered that impression of confidence because it itself is confident and the doctor individually has done likewise.

Television Mirrors

To come back to television—television is a mirror that cannot lie. The Kefauver hearings are proof positive. Television reflects the weaknesses and the virtues, the thoughts and the desires of those who appear before its lens. Only in that it is more restricted is the television lens different from the public eye.

The medical profession proudly presents itself on television and in the public eye because all over the nation, and in Michigan particularly, the profession is confident of its power to serve the people's needs. It has and is taking steps to meet new needs as they arise. As long as it continues honestly to do so, the profession can be confident, and its reflected confidence will be in turn impression making—an impression that the public can safely rest their faith in their doctor and the medical profession generally under a system that recognizes the personal responsibility of the individual—the American System.

PHYSICAL EXAMINATIONS IN INDUSTRY AS CANCER CASE FINDING PROCEDURES

(Continued from Page 403)

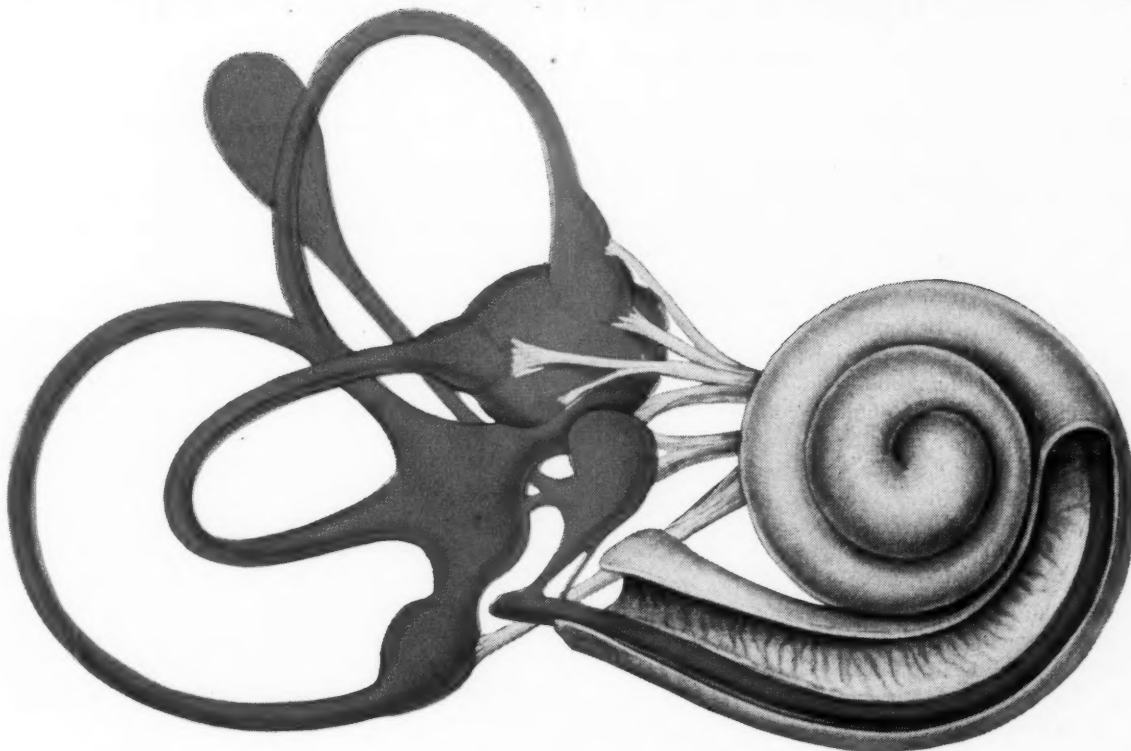
mon sense take hold so you can look at the disease clearly: cancer practically always, in its curable stages, produces one or more of the seven warnings.

"And take cheer in knowing that if cancer is diagnosed early, it can be cured. But only you can give the doctor the chance to make an early diagnosis. Keep alert regarding the symptoms. It's up to you."*

Concluding Comments

Industrial medical examinations are highly specialized and can only be, through incidentals and by-products coming out of the examination, used for the early detection of cancer. It is suggested, however, that the day-to-day contacts in a plant between doctor and employee bring out leads which direct the doctor's attention to possibilities of early malignancies. Employees may then be examined by the plant physician but probably will be referred to their own family doctor or others who are participating in the cancer detection program. Education as carried on by many industrial physicians can be most helpful in attracting employees needing early diagnosis to physicians in the plants, whereupon they can be referred to their own doctors for subsequent study and treatment.

*GM Folks, 13:10, (Sept.) 1950.



Detail of the Labyrinthine Structure

"The prophylactic value of Dramamine was conclusively demonstrated among 170 passengers who volunteered the information that they were unusually susceptible to motion sickness. . . . There was complete relief (freedom from any signs or symptoms of airsickness) in 152 cases or 89.5 per cent; . . ."

—Tuttle, A. D.: *Special Breakdown of Case Histories*, presented at the Airlines Medical Directors Association Meeting, New York, N. Y., Aug. 28, 1949.

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RESEARCH IN THE SERVICE OF MEDICINE SEARLE

Michigan's Department of Health

Albert E. Heustis, M.D., Commissioner

NEEDED: 709 PUBLIC HEALTH WORKERS

To fill vacancies and to meet minimum standards set by the American Public Health Association which call for one public health physician and one sanitarian for every 25,000 persons, Michigan's local health departments now need at least twenty-eight additional public health physicians and thirty-four additional sanitarians. To fill vacancies and provide public health nursing services in the recommended ratio of one nurse for every 5,000 persons, Michigan needs an additional 647 public health nurses to supplement those now employed by local health departments and boards of education.

The fluoridation of public water supplies for the partial prevention of dental caries now has the endorsement of the following national professional organizations: The American Dental Association, the State and Territorial Dental Health Directors, the American Association of Public Health Dentists, the United States Public Health Service, the State and Territorial Health Officers Associations, the American Public Health Association and the American Water Works Association.

Five Michigan cities are among the seventy in the nation which are already fluoridating their public water supplies. Ten others have fluoridation plans approved. Cities fluoridating their supplies include: Grand Rapids, where the Michigan Department of Health, the United States Public Health Service and the city have been co-operating in a fluoridation experiment for the past six years; Midland; Ludington; Algonac; and Hastings. Plans have been approved for fluoridation of the supplies of Wyandotte, Saginaw, Grosse Pointe Farms, Jackson, South Haven, Grand Haven, Muskegon, Mt. Clemens, Marquette and Norway.

The drinking of fluoridated water from birth until eight years, can reduce dental decay as much as 65 per cent in groups of children.

The Heart Issue of *Michigan Public Health* (February) is directed particularly to the thousands of Michigan people, children and adults alike, who have heart ailments. It contains articles on rheumatic fever, high blood pressure, coronary heart disease, research being conducted by the Michigan Heart Association and the Cardiac Housewife program of the Heart Association.

In addition, it contains articles on air pollution hazards in Michigan, new hospitals being constructed in the state, the hazards of x-ray shoe fitting, the prevention of congenital syphilis and many other topics. A copy of the issue, or a year's free subscription to *Michigan Public Health* will be sent to any Michigan resident.

The Middle States Public Health Association will meet April 19 and 20 at the Congress Hotel, Chicago. Members of this association are public health workers

from Michigan, Illinois, Indiana, Iowa, Kansas, Minnesota, Missouri, Ohio, Nebraska, North Dakota, South Dakota and Wisconsin.

What air pollution means to Michigan communities from the standpoint of danger to health, the development of slum or blighted areas, decreased property valuation, decreased tax revenue and harm to the tourist trade was reviewed for Michigan municipal officials in an air pollution institute held at Michigan State College, recently.

Planned by the Division of Industrial Health, Michigan Department of Health, the Department of Engineering of the College, the Municipal League and Industry, the institute pointed up the need for continuing and increasing effort to control air contamination in the state. It considered engineering and other means of correcting and mitigating the effects of industrial air pollution, as well as model ordinances.

Approximately sixty-five mayors, managers, physicians, attorneys, engineers and local health department people participated in the sessions.

A behind-the-scene job of health protection is the Interstate Carrier Watering Point Sanitation program of the Michigan Department of Health. This program is designed to prevent the transmission of food and water-borne diseases to the traveling public and through them to the public at large. Engineers of the Department investigate the sanitation of all sources of milk, cream, ice cream, and the catering establishments for railroads, airplanes and vessels used in interstate travel. This includes fifty-seven depots and railroad yards, airports and ports of call.

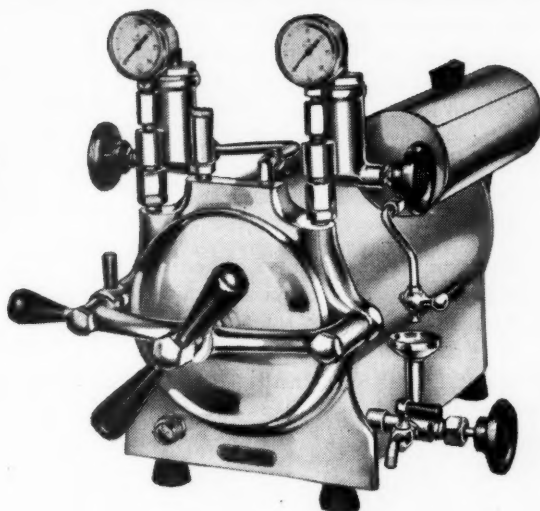
Anticipating April as Cancer Control Month, the March issue of *Michigan Public Health* contains a series of articles on cancer in its more common sites. Special attention is given breast self-examination in the early recognition of cancer of the breast. Copies of the Cancer issue are available.

A new directory of county, district and city health departments has been compiled by the Division of Local Health Administration. A copy of this directory has been sent to each local health department. Additional copies of the directory are available from the Michigan Department of Health.

John L. Isbister, M.D., former staff physician of the Ingham County Sanatorium, joined the staff of the Michigan Department of Health March 1. Dr. Isbister will act as "Tuberculosis Control Officer," working directly with physicians, county health directors and sanatoria directors of the state.

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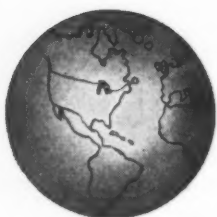
The new, fast Pelton FL-2 is a scientifically-designed, precision-built autoclave. It uses the exact safe, fast principles of large hospital sterilizers: double boiler, air discharge valve, reservoir-condenser to convert steam to distilled water for re-use in boiler (no steam discharge in room), solid bronze safety door, positive door lock and safety catch, fully automatic.

. . .

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NEWS MEDICAL

Michael Reese Hospital, Chicago, is now registering applicants for postgraduate courses to be held during the spring and summer of 1951. These include clinical dermatology, surgery, recent advances in internal medicine, recent advances in pediatrics, diseases of the endocrines, hematologic diagnosis. The courses run from April 2 to August 4. All courses starting on or before July 25, 1951, are approved by the Veterans Administration and may be taken under the GI Bill of Rights. For complete program and information, write Dean Samuel Soskin, M.D., 29th St. and Ellis Ave., Chicago 16, Illinois.

The Oak Ridge Institute of Nuclear Studies announces a course in the theory and techniques of autoradiography, for three to four weeks beginning July 2. For information and application, write Ralph T. Overman, Chairman, Special Training Division, Oak Ridge Institute of Nuclear Studies, P.O. Box 117, Oak Ridge, Tennessee.

HAVE YOU MADE YOUR HOTEL RESERVATIONS?

**Michigan State Medical Society
86th Annual Session**

Grand Rapids, September 26-27-28, 1951

As very few singles are available, registrants are requested to co-operate with the Committee on Hotels by sharing a room with another registrant.

Committee on Hotels, Michigan State Medical Society,
c/o E. J. Brunette, Secy.
Pantlind Hotel, Grand Rapids, Michigan
Please make hotel reservation(s) as indicated below:

Hotel..... (1st choice)

Hotel.....(2nd choice)

.....Single Room(s)

.....Double Room(s) for.....persons

.....Twin Bedded Room(s) for.....persons

Arriving September.....hour.....A.M.....P.M.

Leaving September.....hour.....A.M.....P.M.

(Names and addresses of all applicants including person making reservation.)

Name	Address	City	State
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Figure 1 is a schematic representation of the four experimental conditions. It consists of four horizontal bars, each representing a different condition: (a) Control, (b) 100% TMS, (c) 50% TMS, and (d) 25% TMS. Each bar is divided into segments representing different parts of the brain or body. The segments are labeled with 'TMS' and 'Control'. In the Control condition (a), all segments are labeled 'Control'. In the 100% TMS condition (b), all segments are labeled 'TMS'. In the 50% TMS condition (c), the first two segments are labeled 'TMS' and the last two are labeled 'Control'. In the 25% TMS condition (d), the first segment is labeled 'TMS' and the last three are labeled 'Control'.

Date..... Signature.....

Address..... City.....

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DETROIT, with 30 per cent of Michigan's population, had 57 per cent of the state's tuberculosis deaths in 1949. The 797 tuberculosis deaths for Detroit residents represent a rate of 40.5 per 100,000 population. The rate for Michigan as a whole was 22.0; for the nine other Michigan cities with populations over 50,000, the rates ranged from 9.9 to 22.2.

As of December, 1950, Detroit and the rest of Wayne County hospitalized 2.58 tuberculosis cases per annual tuberculosis death. Michigan excluding Wayne County hospitalized 4.08 cases per annual death.

—Michigan Tuberculosis Association

Prof. W. L. Mallmann, head of the Department of Bacteriology and Public Health, Michigan State College, has been appointed a member of the MSMS Committee on Atomic and Allied Procedures. Other important scientists on this committee include: **K. H. Corrigan**, Ph.D., Detroit; **Howard B. Lewis**, Ph.D., Ann Arbor, Dr. **John J. Grebe**, Midland; Dr. **Laurence L. Quill**, East Lansing.

J. B. Wyngaarden, M.D., and M. H. SeEVERS, M.D., Ann Arbor, are authors of an original article "The Toxic Effects of Antihistaminic Drugs" which appeared in JAMA of February 3, 1951.

Vice Admiral Joel T. Boone, U. S. Navy, retired, took the oath as chief medical director of the Veterans Administration on February 28.

The Western Institute on Epilepsy, will be held in Salt Lake City the week end of June 22-24, 1951. For program, write Harriot Hunter, M.D., President, 4200 E. 9th Avenue, Denver 7, Colorado.

The National Gastroenterological Association's 1951 award contest, for the best unpublished contribution on gastroenterology or allied subjects, features as top prize a Certificate of Merit and a \$100 award. Entries must be received not later than June 1, 1951. For additional information, write to the Association, 1819 Broadway, N. Y. 23, N. Y.

(Continued on Page 418)

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because it is easy to use—no electrodes, pads or danger of sparks. Can be used on metal tables—

For the Orthopedist—

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For the Ophthalmologist—

because it will heat the vitrous of the eye—

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MEDICAL-PERSONAL RELATIONS IN INDUSTRY

The School of Public Health at the University of Michigan offers a special program on Medical-Personal Relations in Industry, May 17 to 19, 1951. The discussion will provide a limited group of industrial medical directors and psychiatrists opportunities for meeting with faculty members of the University of Michigan. Applications for enrollment should be sent to Harry E. Miller, Director of Continued Education, School of Public Health, University of Michigan, Ann Arbor, Michigan. Enrollment fee is \$10.00. Physicians in charge of industrial medical departments and medical assistants, psychiatrists, psychologists and other staff members when designated by the physician in charge are eligible to attend. Attendance is limited to fifty persons.

Limited room accommodations are available at the Michigan Union. Applications for such quarters should be made direct to the Michigan Union stating the accommodations desired.

Thursday, May 17, 1951

- 9:00-11:30 "Nature and Extent of Personality Problems in Industry"
C. H. Keene, M.D., *Chairman*
- 2:00- 4:00 "Identification and Diagnosis of Personality Problems in Industry"
Ralph T. Collins, M.D., *Chairman*

Friday, May 18, 1951

- 9:00-11:30 "Training of Medical Staff for Interviewing"
Henry S. Brown, M.D., *Chairman*
- 2:00- 4:00 "Clinical Psychology in Industry"
Jean S. Felton, M.D., *Chairman*

Saturday, May 19, 1951

- 9:00-11:30 "Problem of Aging in Industry"
R. B. Robson, M.D., *Chairman*

Cook County Graduate School of Medicine

ANNOUNCES CONTINUOUS COURSES

- SURGERY**—Intensive Course in Surgical Technic, two weeks, starting April 16, April 30, May 14.
Surgical Technic, Surgical Anatomy and Clinical Surgery, four weeks, starting April 30, June 4, July 9.
Surgical Anatomy and Clinical Surgery, two weeks, starting April 16, May 14, June 18.
Surgery of Colon and Rectum, one week, starting May 14, June 4.
Esophageal Surgery, one week, starting June 4.
Thoracic Surgery one week, starting June 11.
Gallbladder Surgery, ten hours, starting June 18.
Breast and Thyroid Surgery, one week, starting June 25.
- GYNECOLOGY**—Intensive Course, two weeks, starting April 16, June 18.
Vaginal Approach to Pelvic Surgery, one week, starting May 7, June 11.
- OBSTETRICS**—Intensive Course, two weeks, starting June 4.
- MEDICINE**—Intensive General Course, two weeks, starting April 23.
Gastroenterology, two weeks starting May 14.
Gastroscopy, two weeks, starting May 14.
Electrocardiography and heart Disease, two weeks, starting July 16.
- PEDIATRICS**—Congenital and Acquired Heart Disease in Children, two weeks, starting May 7.
Cerebral Palsy, two weeks, starting July 9.
One year Full Time Clinical Course starting July 2.

General, Intensive and Special Courses in all Branches of Medicine, Surgery and the Specialties.

TEACHING FACULTY—ATTENDING STAFF OF COOK COUNTY HOSPITAL

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Chicago 12, Illinois

(Continued from Page 416)

Emergency Doctor Call System.—Medical societies in 329 communities have established night and emergency call systems, according to a recent AMA report.

"While these plans vary greatly according to the size of the community, they all have the same purpose—to guarantee that the people of the community can obtain a doctor at any time of the day or night, any day in the year," stated Louis H. Bauer, M.D., of Hempstead, N. Y., Chairman of the Board.

Dr. Bauer urged all county medical societies that have not yet established a formal plan for answering night and emergency calls to make that a project during the next few months.

* * *

The Michigan Pathological Society met at the Henry Ford Hospital on February 10, 1951. Dr. A. James French, Associate Professor of Pathology at the University of Michigan, presided as the newly elected President of the Society. Some sixty members and guests attended.

Those contributing to the program were: Dr. Sture A. M. Johnson, Professor of Dermatology at the University of Wisconsin, who spoke on "Mycological Considerations as Related to Pathology"; Dr. B. S. Kline, Assistant Professor of Pathology at Western Reserve University and Laboratory Director of the Mt. Sinai Hospital at Cleveland, who gave a paper on "Recent Advances in the Serodiagnosis of Syphilis"; and in addition to these two guest speakers, a member of the society, Dr. S. E. Gould,

(Continued on Page 420)



some things are Hard To Describe

Some advertisements are more difficult to write than others. What words, for instance, will tell you how handsome, yet how practical, Hamilton Colortone examining room equipment is? We can say— . . . that any of the four distinctive new Colortones brings a gracious note of color to your examining rooms.

. . . that Colortone retains and enhances all the warmth and richness of fine, selected natural wood grains—hand-finished to perfection by Hamilton Craftsmen.

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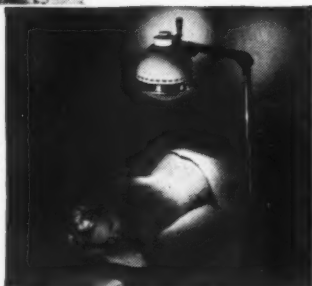
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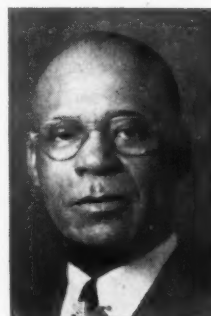
4444 Woodward Avenue, Detroit 1, Michigan

(Continued from Page 418)

Associate Professor of Pathology at Wayne University and Laboratory Director at the Wayne County General Hospital, who spoke on "Diagnostic Tests and Methods of Control in Trichinosis."

At the December meeting in Ann Arbor, Dr. Walter A. Stryker of Wyandotte was made President-elect, and Dr. C. Allen Payne of Grand Rapids, Secretary-Treasurer.

* * *



J. L. LEACH, M.D.

J. L. Leach, M.D., of Flint, has been elected a member of the Board of Directors of the National Association for the Advancement of Colored People, for a three-year term.

Dr. Leach is President of the Michigan State Conference of Branches of the NAACP, Chairman of the State Presidents' Association and for the past three years has served as Chairman of the Committee on Economics of the Genesee County Medical Society.

* * *

Meyer O. Cantor, M.D., and Don W. McLean, M.D., Detroit, are authors of an original article entitled "Intestinal Gas Patterns as a Diagnostic Aid" which appeared in the *American Journal of Roentgenology and Radium Therapy*.

* * *

Max R. Burnell, M.D., Detroit, Chairman of the MSMS Industrial Health Committee, was guest speaker on a panel at the 11th Congress on Industrial Health, in Atlanta, Georgia, on March 1-2-3, 1951. The subject of the panel was "Cardiacs in Industry." Dr. Burnell was official representative of MSMS at this Congress.

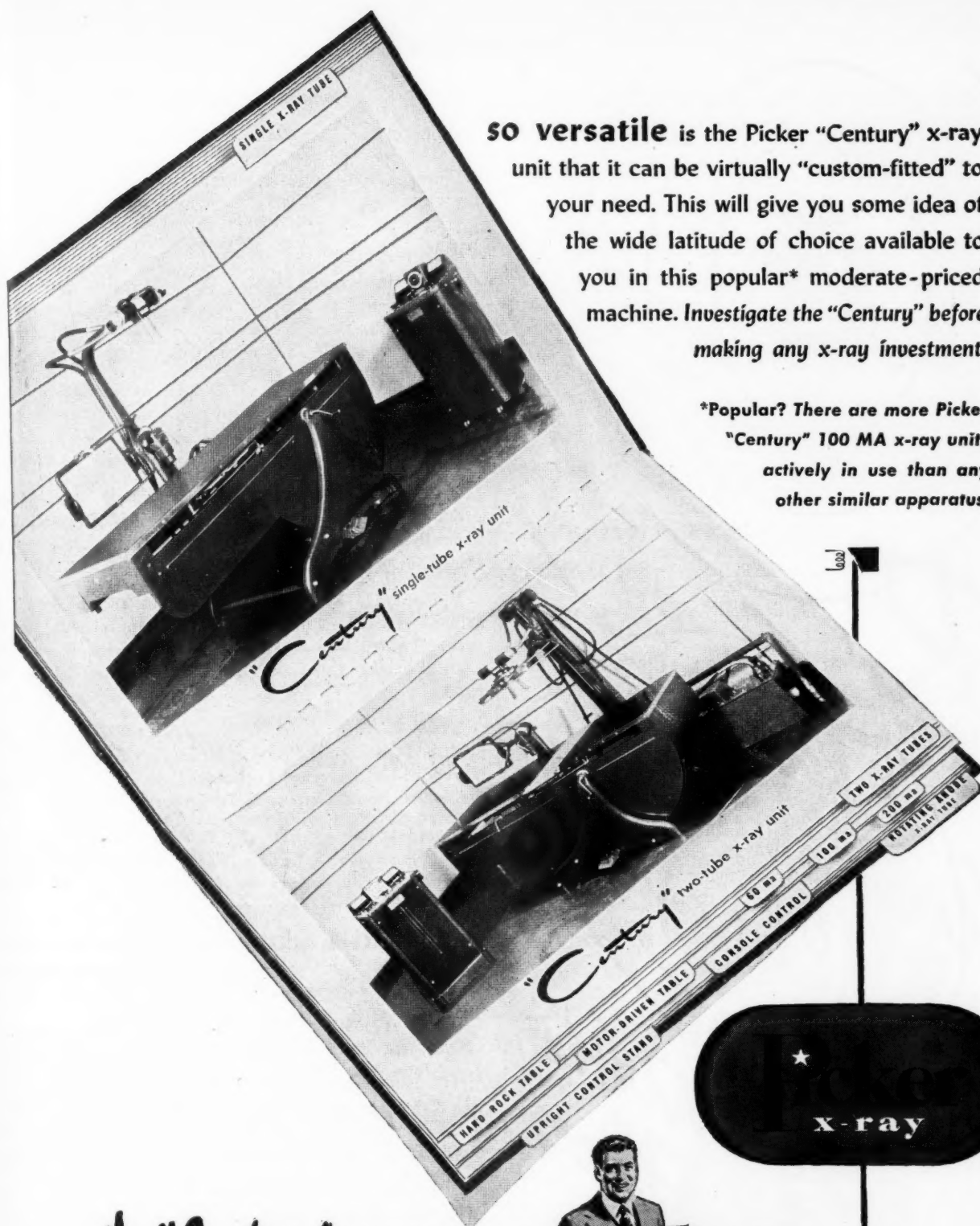
* * *

American College of Surgeons will hold a sectional meeting May 9-11, 1951, in Detroit. On May 9, the University of Michigan Hospital will schedule an excellent day of clinics in Ann Arbor and all registrants are invited to attend this as well as the Wayne Annual Clinic Day at the Fort Shelby Hotel, Detroit. May 10-11 at the Book-Cadillac Hotel, Detroit, will include several new surgical motion pictures, papers, panel discussions and symposia on various surgical subjects. The program will also include special attractions for General Practitioners. A five-dollar registration fee will be required, except from Fellows and members of the Junior and Senior Candidate Groups of the College and from interns and residents. For program, write ACS, 40 E. Erie St., Chicago.

* * *

Ohio State University Health Center on the campus will hold dedication ceremonies May 14-16, 1951. Formal dedication will be at 11:00 a.m., May 15, in the Health Center Quadrangle. May 15 will see scientific

(Continued on Page 422)



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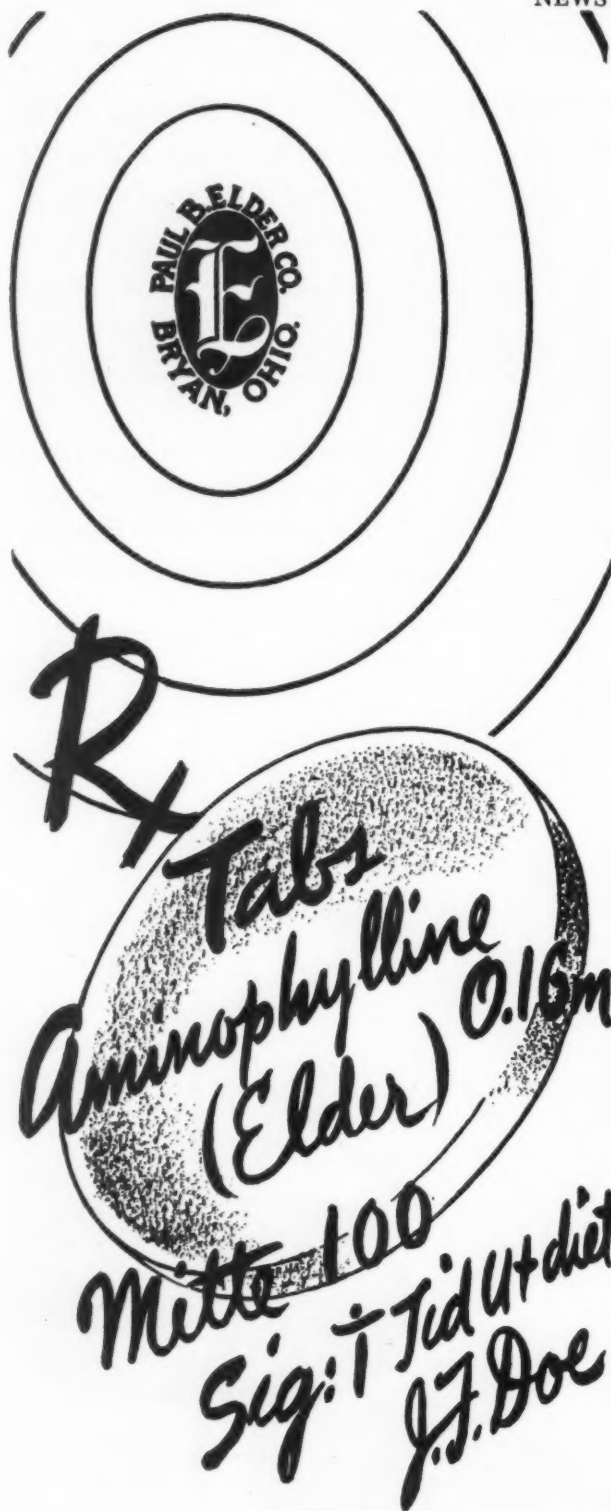
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APRIL, 1951

Say you saw it in the *Journal of the Michigan State Medical Society*

421



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422

Say you saw it in the Journal of the Michigan State Medical Society

(Continued from Page 420)

sessions of the Post-Collegiate Assembly of the College of Medicine in the Auditorium of the Ohio State Museum. All alumni are invited to attend.

* * *

Michigan Authors

J. H. Hertzler, M.D., and C. E. Maguire, M.D., Detroit, published an article, "Congenital Dilatation of the Common Bile Duct: Report of Two Cases in Children" in the *Archives of Surgery*, February, 1951.

Kenneth B. Babcock, M.D., Detroit, published an article, "Telecasts Offer Hospitals a Mass Teaching Medium," in *The Journal of The American Hospital Association*, February, 1951.

Roscoe C. Hildreth, M.D., Kalamazoo, published an article, "Jewels of the Dark Room" in *The X-Ray Technician*, July, 1950; also the *British Journal of Radiology*, December, 1950.

William G. McEvitt, M.D., Detroit, published an article, "Treatment of Acne Pits by Abrasion with Sandpaper," which was reprinted with additions, from *The Journal of the American Medical Association*, March 4, 1950.

Claire L. Straith, M.D., F.A.C.S., F.I.C.S., Detroit, published an article, "Repair of Single Cleft Lip by the Hagedorn-Le Mesurier Technique," in *The Journal of the International College of Surgeons*, April, 1950.

Harold C. Conn, M.D. and Paul W. Feldman, M.D., Detroit, published an article, "Treatment of Amebiasis—Results with Diodoquin and Carbarsone" in the *Postgraduate Medicine*, February, 1951.

Harold C. Conn, M.D., Detroit, published an article, "Treatment of Amebiasis—Results with Bismuth Glycolylarsanilate," in *Postgraduate Medicine*, February, 1951.

Norman F. Miller, M.D., Ann Arbor, gave a paper, "Care of the Postpartum Woman" at the annual session of the Iowa State Medical Society, April 25, 1951.

J. B. Wyngaarden, M.D., and M. H. Seevers, M.D., Ann Arbor, published an article, "The Toxic Effects of Antihistaminic Drugs," in *The Journal of the American Medical Association*, February 3, 1951.

Hermann Pinkus, M.D., of Detroit, published an article, "Granulomas with Eosinophilia ("Eosinophilic Granulomas") in *Medical Clinics of North America*, March, 1951.

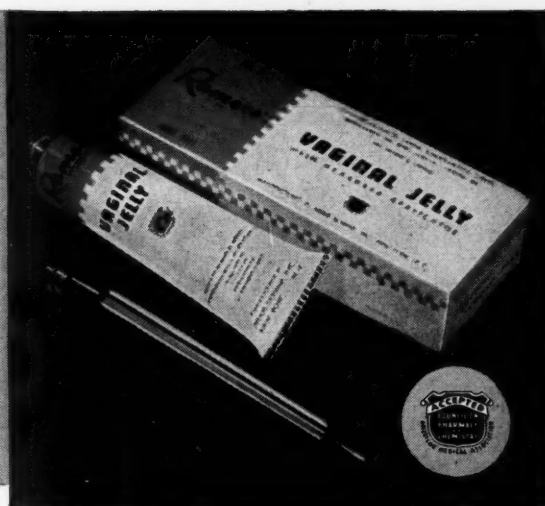
Max Karl Newman, M.D., of Detroit, presented a paper, "Management of Neuromuscular Disturbances Due to Cerebral Vascular Injuries" at the Latin-American Congress of Physical Medicine, Ciudad Trujillo, Dominican Republic, University City, on March 20, 1951.

Leonard E. Himler, M.D., of Ann Arbor, published an article, "Human Relations and Accident Prevention," in *Industrial Medicine and Surgery*, March, 1951.

(Continued on Page 424)

JMSMS

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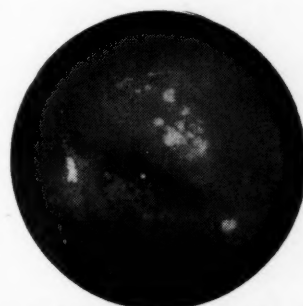


Photo taken after insertion of "RAMSES" Vaginal Jelly. Os occluded.

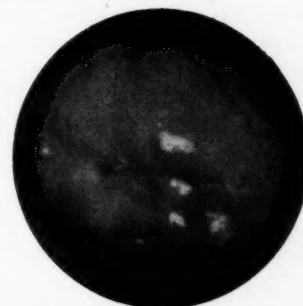


Photo taken ten hours after coitus. Occlusion still manifest.

Jelly stained with nonspermaticidal concentration of methylene blue for photographic purposes.



WHEN THE PRESSURE OF LIVING BECOMES UNBEARABLE *for your Patients*

Hospitalization in the conventional type of hospital is hardly the answer to the needs of your patients suffering from emotional strain or psychosomatic difficulties. Such patients, in order to make the most rapid recovery, can profit much more from sanitarium care designed to individualize the required treatment.

Precisely this type of care is available for your patients at Battle Creek Sanitarium. A board-certified psychiatrist heads a competent professional and nursing staff experienced in handling patients of this type. In addition, such facilities as physical therapy and hydrotherapy, as well as spacious grounds and surroundings that are outstandingly beautiful, all contribute to the patient's rapid readjustment and a renewed cheerful outlook on life.

Battle Creek Sanitarium has been offering its outstanding services continuously for 85 years; James T. Case, M.D., is president of the Board of Trustees.

Wire or call collect for complete information on availability of accommodations.

**THE BATTLE CREEK SANITARIUM
BATTLE CREEK, MICHIGAN**

(Continued from Page 422)

Vocational Rehabilitation.—The annual report of the Office of Vocational Rehabilitation says, "The Nation's two million handicapped men and women constitute one of the few sources at hand to supply our growing manpower requirements." During 1950, 59,597 persons were fully rehabilitated and employed; 11,946 were employed, but under observation, and 13,375 persons are ready for job placement. It is estimated these persons within the next four years will have repaid in income taxes the cost of this rehabilitation, 20.3 million dollars for the year 1950.

* * *

The State Board of Education is holding the Eleventh Annual Parent Institute-Nursery School of the Michigan School for the Deaf, Flint, Michigan, April 2, through April 13. The key speaker will be Mrs. Spencer Tracy, speaking from her own experience as the mother of a deaf son, April 13. Quite an extensive program is provided, including: Bruce R. Siders, superintendent, Michigan School for the Deaf—*Our Aims for You*; Thomas H. Poulos, principal, Michigan School for the Deaf—*Making Use of Residual Hearing*; Mary A. Blair, consultant, Division of Special Education, Department of Public Instruction, Lansing—*Language Development in the Young Deaf Child*; M. Bethel Clifford, field service assistant, Michigan Association for Better Hearing, Lansing—*Lipreading, a Boon to the Deafened*; Clifford E. Mohan, supervising teacher upper academic classes, Michigan School for the Deaf—*The Testing of Hearing*; Bruce S. Siegenthaler, senior clinician, Speech Clinic, University of Michigan, Ann Arbor—*New Developments in the Field of Testing*; H. Earle Correvont, director, Office of Vocational Rehabilitation, Department of Public Instruction, Lansing—*The Services of the Office of Vocational Rehabilitation*; Earl W. Jones, teacher, Michigan School for the Deaf—*Adjustment of the Adult Deaf*.

* * *

World Medical Association.—The Fifth General Assembly of The World Medical Association will be held in Stockholm, Sweden, September 15 to 20, 1951, and will be followed on September 21, by a meeting of the Medical Editors of the world.

About twenty members of the United States Committee attended the Third General Assembly in London, and a large number attended the Fourth General Assembly in New York City. The World Medical Association hopes that many will be able to attend the Fifth General Assembly. While voting members of the Assembly are restricted to two from each national member association, you as a member of the United States Committee are entitled to attend as an Observer, and a credential card as such will be issued you by this office if you desire to attend.

It is understood that several members are planning a trip to Europe next summer, and it is suggested that they plan, if possible, to remain for The World Medical Association meeting. Other meetings at about the same time are:

(Continued on Page 426)

A New Address . . .

Detroit's Finest Optical Firm



A view of the foyer and service desk at Ion Optical Company's new Detroit office.

Entrance to Ion Optical's new Detroit office, at 40 W. Adams.



. . . Ion Optical Company, successors to Uhlemann Optical Company of Michigan, is now in its new home at 40 West Adams. Please accept this invitation, doctor, to stop in and see for yourself the beautiful and modern surroundings we have provided for you and your patients. Of course, as in the past, our skilled craftsmen and our ethical operation will continue to guarantee complete satisfaction to both physician and patient.



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Relationship of Stress to Autonomic Lability

Studies in psychosomatics have shown that functional disorders often are a result of the patient's inability to adjust to emotionally stressful situations (stressor factors).

Nervous tension and chronic anxiety, discharged through a labile Autonomic Nervous System, can cause somatic disturbance.^{1,2} Such states may involve any one of the organ systems or several at one time.^{1,3} The outline below is designed to relate gastrointestinal and cardiovascular symptomatology to the exaggerated response of the autonomic nervous system.

	Physiologic Effects of Autonomic Discharge	
	Sympathetic	Parasympathetic
Gastro-intestinal System	Hypomotility Intestinal Atony Hyposecretion Reduced salivation	Hypermotility Gastrointestinal spasm Hypersecretion
Cardio-vascular System	Rapid heart rate Peripheral vaso-constriction	Slow heart rate Vasodilatation
Functional Manifestations	Palpitation Tachycardia Elevated blood pressure Dry mouth and throat	Heartburn Nausea-vomiting Low blood pressure Colonic spasm

The data here tabulated is from references 3,4,5,6,7, given below.

When the clinical picture is suggestive of functional disorder, the diagnosis is supported by the presence of the following indications of autonomic lability:

Variable Blood Pressure
Body Temperature Variations
Changing pulse rate
Deviations in B. M. R.
Exaggerated Cold Pressure Reflex
Oculo-Cardiac Reflex Abnormalities
Glucose Tolerance Alterations

Therapy in these cases is directed toward: 1) relieving the somatic disturbance to prepare the patient for psychotherapy*; 2) guidance in making adjustment to stressful situations and correction of unhealthy attitudes.

*Drug treatment using adrenergic and cholinergic blocking agents in conjunction with sedatives. 8,9,10.

1. Ebaugh, F.: *Postgrad. Med.* 4: 208, 1948. 2. Wilbur, D.: *J.A.M.A.* 141: 1199, 1949. 3. Williams, E. and Carmichael, C.: *J. Nat'l. Med. Assoc.* 42: 32, 1950. 4. Goodman, L. and Gilman, A.: *The Pharmacological Basis of Therapeutics*, The Macmillan Co., 1941. 5. Katz, L. et al: *Ann. Int. Med.* 27: 261, 1947. 6. Weiss, E. et al: *Am. J. Psychiat.* 107: 264, 1950. 7. Alvarez, W.: *Chicago Med. Soc. Bulletin*, 581, 1950. 8. Rakoff, A.: *A Course in Practical Therapeutics*, Williams and Wilkins, 1948. 9. Karnosh, L. and Zucker, E.: *A Handbook of Psychiatry*. C. V. Mosby Co., 1945. 10. Harris, L.: *Canad. M.A.J.* 58: 251, 1948.

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(Continued from Page 424)

1. International Foundation for Infantile Paralysis, Copenhagen, September 3-7, 1951.
2. World Confederation for Physical Therapy, Copenhagen, September 7-8, 1951.
3. International Society for the Welfare of Cripples, Stockholm, September 10-14, 1951.

In order that the Swedish Committee on Arrangements may have an estimate of the number of hotel rooms to reserve for individuals attending the Fifth General Assembly, we have been asked to submit an estimate of the number of United States Committee members likely to attend.

For additional information, write Dr. Louis H. Bauer, The World Medical Association, 2 East 103rd Street, New York 29, New York.

PAROTID GLAND TUMORS AND THEIR SURGICAL MANAGEMENT

(Continued from Page 401)

2. Several common misconceptions concerning the management of tumors of the parotid gland are considered. The practices of waiting for tumors to become large, of performing inadequate surgery because of fear of injury to the facial nerve and the unjustified use of roentgenotherapy are particularly condemned.

3. The techniques of subtotal parotidectomy, (superficial lobectomy) and parotidectomy, with the patient under general anesthesia, are described. Emphasis is placed first on removal of sufficient tissue; preservation of the facial nerve is held to be of great importance, but secondary in importance to complete excision of the neoplasm.

4. Methods of management of temporary or permanent facial palsy are outlined.

References

1. Bailey, H.: *Brit. J. Surg.*, 28:337, 1941.
2. Bassoe, P.: *M. Clin. North America*, 16:405, 1932.
3. Brown, J. B.: *Ann. Surg.*, 109:1016, 1939.
4. Dahlberg, A. A.: *J.A.M.A.*, 124:503, 1944.
5. Foot, N. C.: *Pathology in Surgery*. Philadelphia: J. B. Lippincott Company, 1945.
6. Janes, R. M.: *S. Clin. North America*, 23:1429, 1943.
7. Kennon, R.: *Brit. J. Surg.*, 9:76, 1922.
8. Lodge, W. O.: *Brit. J. Surg.*, 17:422, 1929.
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10. McCormack, L. J.; Cauldwell, E. W., and Anson, B. J.: *Surg., Gynec. & Obst.*, 80:620, 1945.
11. McFarland, J.: *Surg., Gynec. & Obst.*, 76:23, 1943; 63:457, 1936; 57:104, 1933. *Am. J. M. Sc.*, 172: 804, 1926.
12. Sheehan, J. E.: *Surgery*, 27:122, 1950.

CAMP ANATOMICAL SUPPORTS for ORTHOPEDIC CONDITIONS



Whether it be relief from lesser degrees of postural or occupational strain, or as an aid in treatment following injury or operation, the Camp group of scientifically designed orthopedic supports for men, women and children will be found "comprehensive." Sacroiliac, Lumbosacral and Dorso-lumbar supports may be prescribed for all types of build. The Camp system of construction fits the support accurately and firmly about the major part of the bony pelvis as a base for support. The unique system of adjustment permits the maximum in comfort. Physicians may rely on the Camp-trained fitter for the precise execution of all instructions.

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Supplied: 10 mg. riboflavin per cc., 1 cc. ampules and 10 cc. multiple-dose vials.

THE G. A. INGRAM COMPANY

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WHAT IS A PRACTICAL CANCER DETECTION PROGRAM?*(Continued from Page 390)*

2. No universal specific diagnostic test for cancer has yet been found reliable. Some proposed tests give promise of value on further refinement but in their present state are unsafe as definitive diagnostic procedures.

3. Wherever possible, findings of health examination programs should be pooled to avoid costs and labor of duplicate examinations in the same field.

4. Pending development of a specific diagnostic test for cancer, examination of readily accessible sites by the physician in his own office during office hours will provide this service to the largest number of people and will result in discovery of a significant number of cancers and the saving of many lives. It will also increase the interest of both physicians and laity in the value of such examinations as case-finding procedures.

THE REGISTER IN THE MICHIGAN CANCER PROGRAM*(Continued from Page 406)*

agencies are made available to the physician and his patient.

5. The Register assures follow-up and continuity of care for patients.

6. Analysis and interpretation of data direct the planning of educational programs by pointing out the strengths, weaknesses and needs of the physician and public.

7. The Cancer Register should be established and maintained at the operating level of the program.

8. Community requirements for medical facilities can be determined.

9. The Register enables epidemiological studies revealing carcinogens indicating possible preventive measures.

10. In accordance with provisions of Act 146, P.A. 1919, Cancer was declared reportable in 1947 by the Michigan Department of Health, providing the necessary legal basis for the reporting of Cancer and the establishment and maintenance of the Cancer Register.



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Acknowledgment of all books received will be made in this column, and this will be deemed by us as full compensation to those sending them. A selection will be made for review, as expedient.

HANDBOOK OF OBSTETRICS AND DIAGNOSTIC GYNECOLOGY. By Leo Doyle, M.S., M.D., First Edition. Illustrated by Ralph Sweet. Palo Alto, California: University Medical Publishers, 1950. Price \$2.00.

A pocket handbook with short and concise outlines of diagnosis, examinations, and therapeutic procedures is intended for quick reference when time cannot be taken to read detailed descriptions. The book is in imitation typewriting, well printed and profusely illustrated by well-selected line sketches. It can be carried easily in the pocket or the handbag.

THE NEUROLOGIC EXAMINATION INCORPORATING THE FUNDAMENTALS OF NEUROANATOMY AND NEUROPHYSIOLOGY. By Russell N. DeJong, M.D., Professor of Neurology and Chairman of the Department of Neurology, University of Michigan Medical School. With 368 Illustrations. New York: Paul B. Hoeber, Inc., Medical Book Department of Harper & Brothers, 1950. Price \$15.00.

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(Continued on Page 432)

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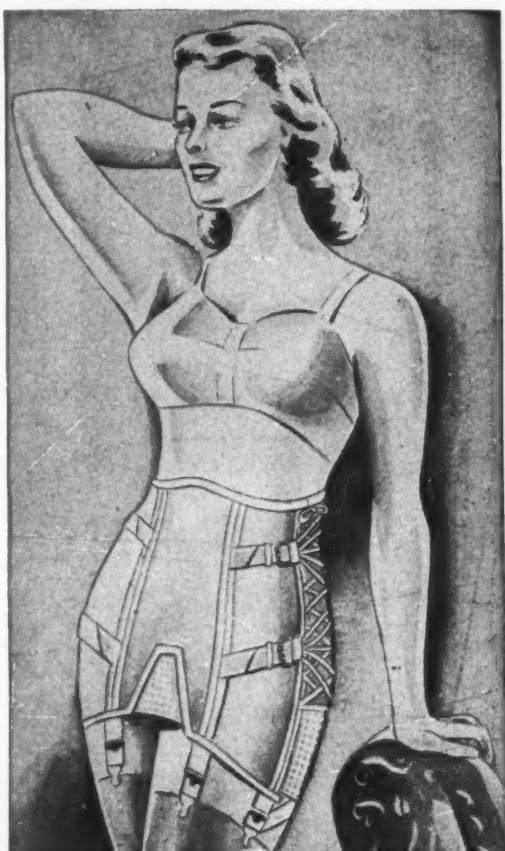


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(Continued from Page 430)

neurology is incomplete without an incorporation of anatomical and physiological changes as pertain to any particular disease. The author's presentation is ably done, both in script and illustrations. He has included all known methods of testing as well as special testing techniques. He has emphasized muscle and nerve testing, a phase of examination that is usually too scant in volume on this subject. He has not neglected the differential study of diseases.

This book can be unqualifiedly recommended to the student and clinician. The student will be able to conserve a great amount of time in his studies; it will be a treatise for the clinician, and the research man will appreciate the extensive reference list.

G.K.S.

NASAL SINUSES. An Anatomic and Clinical Consideration by O. E. Van Alyea, M.D., Associate Clinical Professor, Department of Laryngology, Rhinology and Otology, University of Illinois College of Medicine, Chicago. Second Edition. Baltimore: The Williams and Wilkins Company, 1951. Price \$9.00.

Dr. Van Alyea in his second edition found it necessary to revise extensively due to the great strides made in physiological knowledge and the newer antibiotic and other methods of treatment. We are particularly pleased with the apparent conservatism of the author in his treatment of sinus disease. He believes great success can, and is being obtained by the simpler

(Continued on Page 434)

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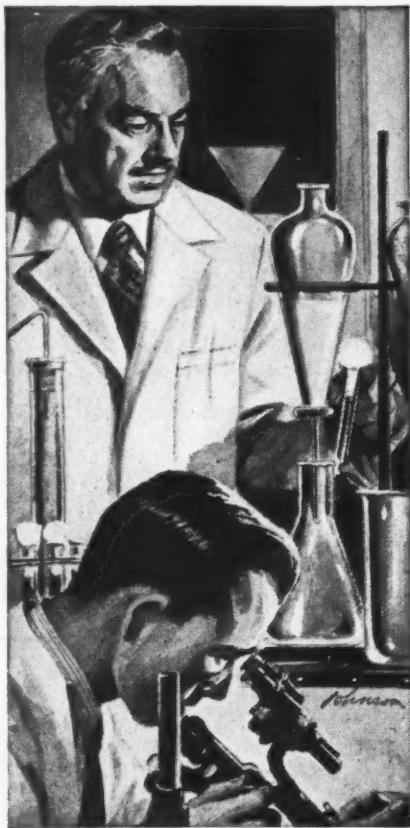
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(Continued from Page 432)

and more conservative procedures. He says the majority of persons still doing radical sinus surgery are refusing to consider or believe the results that can be obtained by simple window and drainage procedures. The author's style is clear, and pleasing, being easy to follow, and a pleasure to read. We believe this book should be studied by all rhinologists, who will then make their own decisions.

PHYSICIAN'S HANDBOOK. By Marcus A. Krupp, M.D., Assistant Clinical Professor of Medicine, Stanford University School of Medicine, Director, Clinical Pathology Veterans Administration Hospital, San Francisco; Norman J. Sweet, M.D., Assistant Professor of Medicine, University of California School of Medicine, San Francisco; Ernest Jawetz, Ph.D., M.D., Associate Professor of Bacteriology and Lecturer in Medicine and Pediatrics, University of California School of Medicine, San Francisco; Charles D. Armstrong, M.D., Clinical Instructor in Medicine, Stanford University School of Medicine. Sixth Edition. Palo Alto, California: University Medical Publishers, 1950. Price \$2.50.

This is a compact book, with round corners, easily going into a pocket, and readily available. The contents are divided into thirty chapters, from outlines of history taking, Nervous System examinations, Cardio-respiratory examinations, electrocardiology, Biologic therapy, and every field in the body, ending with pathological examinations, and simplified laboratory procedures, and an appendix giving many formulae, tables, et cetera. It is a very handy volume, and will replace many of the larger unwieldy tomes.

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